AMERICAN PHRENOLOGICAL JOURNAL.

A Repository of Science, Literature, General Intelligence.

VOL. XXII., NO. 5.] NEW YORK, NOVEMBER, 1855. [$1.00 A YEAR.

Published by
FOWLER AND WELLS,
No. 308 Broadway, New York.

Contents.

Phrenology—The Mentality of Birds, page 97.
Biography—Joel Shew, page 100; Carl Maria Von Weber, page 101.
General Articles—Alcohol and Food, page 102; Shape of the World, 104; Criminal Legislation, 106; What to Eat, and Why, 107; Gymnastics as a Part of Education, 109; The Structure of the Brain, 110; Man an Ape, 111.
Events of the Month, page 112. To Correspondents, page 114.
Literary Notices, page 114. Miscellany, page 115.
Varieties—Labor: a Physiological Argument—Subjects for Artists—Listening to Evil Report—Truth—Townsend the Murderer—A Tribute to Phrenology—True Education—Smoking Arsenic with Tobacco—An Ingenious Invention—Curious Chinese Proverbs—Grammar—A Joke at Our Own Expense—The Fruit Trade—New Gridiron—Advertising—How Our Bodies are Made Up, pages 116 and 117.

The Phrenological Almanac for 1856 is now nearly ready for the press. Popular as has been this little annual for years past, it is our intention to make the one for the coming year more worthy of public patronage, if possible, than any of its predecessors. It will be illustrated with many engravings, and contain matter of interest to all. We shall print a large edition, and shall be ready to supply any quantity.

Booksellers, or others, desiring an edition for their own sales, can have them with their own imprint, and a page of Business Advertisement, at reasonable rates.

Please Specify.—When renewing subscriptions, the writer should specify which Journal is wanted, the Phrenological, Water-Cure, or Life Illustrated.

Franking Letters.—Postmasters often, unintentionally, subject us to the payment of five cents postage on letters relating strictly to Post-Office business. By referring to the laws of the department it will be seen, that besides marking letters "Free," it is necessary to annex the name in full thus: Free. John Smith, P. M. Nothing less constitutes a frank.

On the Same Terms.—It will be the same to the Publishers, if twenty copies of either or both the Phrenological Journal, the Water-Cure Journal, or Life Illustrated, are taken in one club at club rates.

Premium Books may be sent by express or by mail, according to the wish of the agent. If by mail, the amount, in postage stamps, should be sent to prepay the same; if by express, the freight may be paid where the package is received.

THE MENTALITY OF BIRDS.

BY J. REED.

The primary principles of phrenological science rest upon the determination of the true physiology of the brain and nervous system. As the brain is more or less perfectly formed in all animals, the expositions of the science are not limited in their application to the character of man alone. Wherever this nervous viscus is present, there must, consequently, exist a corresponding degree of mentality; and as both of these are found in animals — existing in all grades and varieties—the study of Comparative Phrenology (or the phrenology of the animal kingdom) becomes quite as interesting as its pursuit in determining human character. To trace the relative size of the brain and nervous system through the vast scale of animal existence, from the lowest reptile to the crowning work of creation—detecting a uniform physiological principle throughout the whole—would seem to be the most beautiful result of all the operations of science.

Fig. 1.—AMERICAN PHEASANT.

The Brain exposed—the eye drawn forward, to show the optic nerve.—1, The Left Hemisphere of Brain. 2, Cerebellum. 3, Optic Ganglion. 4, Medulla Oblongata. 5, The Eye. 6, Optic Nerve, entering the Eye. 7, 8, Cranial Nerves. 9, 9, Outline of Cranium. 10, Socket of Inferior Mandible.

At present, this field is only partially explored. But that which has already been ascertained serves us, to some extent, in explaining the mental nature of various living creatures.

We would apply the principles of our science to an investigation of the character of birds. In this department, as in all others, we shall be aided by a knowledge of the form of the brain in different species. We must therefore endeavor to convey to the reader as clear an idea as possible of the form, size, and relative influence of their brain.

Fig. 1 is drawn from nature—one half the cranium being dissected away—exhibiting the brain and a portion of the nerves in position.

There is rarely found in any animal so great a proportionate development of the encephalon as exists in varieties of the feathered race. The human brain is not large when it is considered as a fraction of the body. For, allowing a man to weigh 165 pounds, and the brain 3 1-3 lbs., the fraction would be 1-50, while that of some birds may be stated at 1-25 of the entire body. In addition to which, they have a proportionally large nervous system, and also, from the nature of their organization, an airy vigor of temperament which imparts great intensity of action.

There is, of course, no comparison between the *size* of the human brain and that of birds, neither is the general contour similar; for the hemispheres of the cerebrum in birds do not extend backward over the cerebellum, nor forward over the eye. They are without convolutions, there being no great amount of cerebral surface. It will be seen that the optic nerves are large; and in some varieties they are almost equal in size to the medullary column. Upon the principle that "size is the measure of power," there must be a more than ordinary degree of visual power displayed in the species.

Vision is, indeed, their strongest and most

acute physical sense. The eye is very large, not more than one-fifth of the anterior aspect being seen in the living specimens. Another peculiarity is the great size of the optic ganglia, which correspond to the optic thalami in man. These bodies of nervous tissue being the origin of the optic nerves, are undoubtedly the seat of the sense of sight, through which the bird becomes

FIG. 2.—GOLDEN-WINGED WOODPECKER.

VIEW OF SUPERIOR SURFACE.—1, 1, Cerebrum. 2, Cerebellum. 3, 3, Optic Ganglia. 4, Medulla. 5, Olfactory Bulbs.

conscious of vision. The cerebellum is seen to be that corrugated body behind and below the brain proper; it is comparatively much larger in some species than in others, being largest in the strongest birds and those of a more salacious disposition.

When divided by a vertical incision, as in Fig. 4, the leaf-like arrangement, known as the Arbor Vitæ, is apparent. According to our investigations, this peculiarity is caused by a folding of the brain substance, producing a kind of intricate convolution, which, with care, may be disjoined, exhibiting a structure similar to that in the human subject. The cerebellum is, however, the only convoluted portion of the brain of the feathered race. It is not divided into lobes, as it is in man, yet it more nearly resembles it in structure and color than any other part. This would argue a function nearly similar; and it is probable that in this particular there is a close resemblance in disposition.

Fig. 2 gives a view of the top of the brain of a bird of extraordinary strength, considering its size, and of a strong sexual predilection. The cerebellum and inferior portion of the brain is much enlarged.

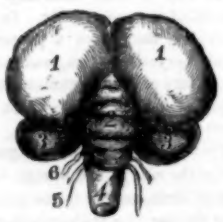

FIG. 3.—PIGEON HAWK (*Falco Columbarius*).

BACK VIEW OF BRAIN.—1, 1, Right and Left Hemispheres. 2, Cerebellum. 3, Optic Ganglia. 4, Medulla. 5, 6, Nerves.

Fig. 3 is that of the Pigeon Hawk, and exhibits great width, and is but another confirmation of the law that all carnivorous animals and birds are broad-headed—being vindictive and destructive in their character, ever carrying vengeance in their eye.

Though it is probable that birds are possessed of a great number of the phrenological faculties, it is not easy to determine the particular form of an individual organ, owing to their diminutive size. Actual manipulation can alone detect the slight differences in many varieties. The various regions are generally easily distinguishable. An inspection of the cranium, as it holds the brain in true position, is the best means of determining these regions.

Fig. 6, of the Blue Jay, exhibits considerable elevation in the region of pride and vanity, which corresponds most truly with its character as a pompous and over-vain songster of the wood.

No. 5, of the Dove, has a configuration which indicates a general depression in these organs; hence it is the emblem of peace, and the model of a retiring, unostentatious, and devoted little lover.

The nervous system of birds generally is fully developed. It imparts an intensity of feeling and quickness of action, and, as the lungs are large, the blood is thoroughly oxygenized. The pulse is found to be in some instances fluttering at the rate of two or three hundred strokes per

FIG. 6.—BLUE JAY.

BRAIN IN POSITION.—1, Cerebrum. 2, Cerebellum. 3, Optic Ganglion. 4, Medulla. 5, 5, Outline of Cranium.

minute. The respiration is proportionally rapid. Their temperature, as indicated by the thermometer, is 104°. Various parts of the body are penetrated by air, such as the bones and sides of the abdomen, thus rendering respiration more complete, and imparting an elevated temperature.

On inferring the general characteristics of the race from the cerebral development, we may first remark, that the diminutive size of the brain in the mass of birds would indicate that they possess but a very narrow range of intellect, and that its operations are simple and direct, yet complete in their action. But the fiery vigor of organization imparts a sprightliness and energy which makes great amends for deficiency in size. So nearly similar are their mental manifestations, that they appear alike to us; the differences of degree are entirely unnoticed, and it is only in the habits of the different species that we perceive a dissimilarity. The character of two robins cannot be distinguished by us, and yet their companions recognize most wonderful differences, as is proven by their loves, quarrels, and the like. The mental nature seems to be complete in itself, but finite, and devoid of all demonstrations of power, except, perhaps, in the larger species, where actual size renders them formidable; and when accompanied with a high degree of Combativeness

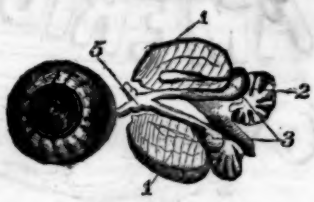

FIG. 4.—NIGHT HAWK.

THE BRAIN LAID OPEN—exposing the arbor vitæ, the optic ganglia and nerves.—1, 1, The Halves of the Cerebrum. 2, The Cerebellum. 3, The Optic Ganglia. 4, The Eye. 5, The crossing of the Optic Nerves.

and Destructiveness, and the energizing faculties generally, they become terrible—even to man himself.

A careful study of the qualities, habits, and desires of the race, can leave but little doubt that they possess nearly every faculty of mind which is found in man. This would not be any degradation of the character and nobility of man, nor a more than just estimation of the mental endowments of the feathered tribes. Man is infinitely removed from the lower animals, and nothing sustains this assertion more conclusively than his phrenology.

Yet the "little winged songsters" are possessed of love, fear, pride, hope, conscience, and intellect, all capable of being tested by us, and even improved by education. The more spiritualizing faculties are probably wanting—at least, there is no comparison with those of man.

The exquisite sensibility of birds rivals that of every other living being. The sense of sight is wonderfully acute; and they are enabled to adapt it to all distances and objects, and thus fly through the thick forest, avoiding every impediment, and discovering their prey at every angle. But the sense of touch being

FIG. 5.—TURTLE DOVE.

1, Cerebrum. 2, Cerebellum. 3, Optic Ganglion. 4, Medulla—Origin of Spinal Column.

a necessary concomitant of that of motion, is also very delicate, rendering them constantly alive to impressing influences. Their olfactory powers being less necessary, are not remarkable. The

popular opinion that the class of vultures discover their peculiar food by means of the scent, is founded in error, as the experiments of Audubon prove that they detect its locality by means of sight alone. Taste is likewise very feeble. But hearing is quick and accurate. This is not only shown by their alertness on hearing noise, but by their powers of song: this spontaneous desire could not be indulged in the absence or feebleness of this sense. It is easy to believe that the mocking-bird, as he utters his varied notes, is as much charmed with his own music as are his human auditors. The sense of sight and hearing are more closely allied with the emotions than the others: an object of sight or a plaintive tone produces an immediate effect upon our passions and sentiments. Hence we might infer that birds fully appreciate the beauty of surrounding nature, and relish the music that fills the forest on bright summer mornings. When the thrush mounts to the top of a tree, and pours his torrent of song, the air is serene, and there is a gladdening tone in the very aspect of nature. Does he amuse himself without appreciating his own notes, or look down on the wild scenes below without gathering inspiration for a more thrilling song?

Birds have been considered to be endowed with less intelligence than they really possess; for, in many instances, we have demonstrations of the existence of a considerable amount of intellect. Such are not merely exceptions in nature, but are those which have come more directly under human observation. The deprivation of the faculty of speech in animals has the effect of rendering their mental qualities more obscure. There are many remarkable instances recorded of the shrewdness of several varieties of birds. Everybody is acquainted with the powers of imitation in the parrot, to which it adds a ready intelligence.

The *Youth's Penny Gazette* contains a well-authenticated account of a bob o' link in the possession of a gentleman in Massachusetts, which, on being placed in a cage with two or three canaries, after long and arduous practice, learned the canary song. He took up the task "without a master," and gradually acquired it, note by note, finishing to his satisfaction in a few months. He then endeavored to sing his own native song, which he had entirely neglected during this time, but the result was a strange blending of both bob o' link and canary; still, he finally succeeded in accomplishing it perfectly. He would on any occasion, by getting the *key-note* from the canaries, sing in concert with them, observing the most accurate time—regarding himself as an accomplished little musician, as he undoubtedly was.

All varieties are more or less capable of education. We have seen the prairie hawk instructing its young, when able to fly, in the art of catching their prey in the air.

The parent bird ascends to a great height with a mouse in its talons. The young petitioner for this morsel flies far beneath; when it arrives directly under the first, the mouse is let fall, and the young hawk instantly turns over in the air, and seizes it, as it descends, upon its claws. There is little doubt but that a novel system of early education prevails throughout the feathered tribes—by which the young are taught to avoid danger, procure food, to sing the song, and perform those things which it would be impossible to do at first attempt.

A story of the thrush is related by Jardine:—that having established its nest near a quarry of stone where it was disturbed by the blasts, it soon learned to leave the nest whenever it observed the men leave the quarry previous to an explosion. The workmen noticing this, would, for the joke, leave their work when no blast was impending. The thrush likewise absented itself, until it perceived that nothing occurred, so that whenever the workmen left thereafter, it would steal to the edge, and see whether there was any smoke of the fuse; if not, it returned to its nest; if there was, it immediately flew away.

This was frequently observed by visitors. Such ingenuity in so small a creature must have another explanation than that of an instinct, which is said to direct their movements without any aid of experience. If space allowed, or it were necessary, we could add numberless incidents, truthfully recorded, (a denial of which would only betoken a stupid incredulity,) of the extraordinary intelligence of this most interesting race.

We may, then, consider birds as being endowed with a certain degree of intelligence; and, though none of their operations may be understood as a process of reason, still they are certainly closely allied to it. From their limited mental capacity, they manifest no grand evolutions of mind, as man does, or as are even exhibited in the superior brutes. Their desires or instincts are primary and direct, and they have no need of elaborate processes of thought. Their song is a strain of melody, without anything like studied harmony of sound, as they would be capable of appreciating no other. The music of the grandest opera would seem, to an uncultivated ear, but a jumble of notes "low, and soft, high and loud;" while to an individual of refined musical taste there is no superior enjoyment.

No portion of animal existence has the beauty of form and variety of color which birds have; and it would be unnatural to suppose that they have no apprehension of qualities, or even to deny them the ideal appreciation of their own beauty. A peacock certainly fully considers and understands the splendor of his train, and the flowing grace of his form. But to be thus able to comprehend forms and colors, it is positively necessary, reasoning *à priori*, that it be endowed in some degree with the organs of Form, Color, and Ideality.

But the controlling element in the race of birds is that of love. This they seem by nature and situation best fitted to enjoy. Their whole existence seems to be one of devoted attachment to their mate and young; and with them their life is the enjoyment of the purest pleasure. With the most beautiful and secluded localities for their abode—with the wide air for their field of free movement, the bird—whether weak or powerful—doubtless enjoys the holiest feelings which so inferior a creature could be capable of experiencing. What is more exhilarating than to watch in silence the manœuvres of a pair of little songsters performing the, to them, great work of building a nest? In their fraternal and conjugal offices they exhibit a devotedness and purity that puts to shame half of the civilized world. They are models of faithfulness, industry, and kindly attention. Though we may affect to despise so insignificant a pattern—may even seem to consider the notice of such a creature as a little feathered songster as beneath the dignity of human nature—still, he who has so far distorted his feelings as not to draw, even from the example of a bird, some idea of his own duty, may be little envied his sentiment. One would rather partake of the spirit of that great man who devoted a life to the study of the "Birds of America;" and who caught inspiration from their song, and found in the study of their beauty and loving attributes ample return for the toil which he zealously withstood in striving to set before the world in panoramic view the fairest portion of created things.

There is a power, a just estimate of which will explain many phenomena incident to the race. They are endowed with a perception which exists to a degree in many human beings, which enables them to detect the slightest variations in the electrical condition of the atmosphere. This seems to be a general law of nervous action—a link in the great chain of phenomena which the mind and nervous fluid are constantly producing. It is well known that the Western hunters and mountaineers can foretell the approach of a storm by the twinges of rheumatism which may afflict them; and these strange but reliable portents are regarded as carefully as barometrical indications are at sea. Birds being exposed to the ever-varying influences of climate, are endowed with this nervous impressibility (which they seem to cherish and scrupulously observe), and by which they are enabled, magnetically as it were, to anticipate the approaching tempest. With what interest we listen to their warning voices previous to its occurrence! Nature has not exposed them without providing means for their preservation. Armed with this power, they seek necessary food and shelter. As the frosts of winter are stealing down upon them, they are thus forewarned to commence their journey towards the south—which they can readily accomplish, since some species, as pigeons, can traverse the requisite distance in a few hours. Some varieties go and return, for their daily food, a distance of two hundred miles: their migrations are not, then, so wonderful as we might suppose. When the laws regulating the action of the nervous system are unfolded, the phenomena of bird-life will be equally well understood, and the mystic Instinct by which their movements are now said to be controlled, will be regarded as a term of very different import.

INSTINCT.

We now enter upon that portion of our subject in which we design to treat more particularly of the mentality of birds. As we before stated, there have been little differences detected in birds of the same species. It is only in those of a contrary kind that a dissimilarity of character and habit has been often observed. The difficulty of correctly explaining the phenomena

JOEL SHEW.

of mind in the feathered race produced an inclination to class all such phenomena under the general head of Instinct. It was supposed that instinct controlled all their operations, from their migratory movements to the selection of their daily food; and, indeed, it may; but so many theories are presented for the explanation of this subject, that a great contrariety of opinions exists as to what it really is. From time to time, a vast amount of "Anecdotes of Birds" have accumulated—some of which furnish such curious incidents, that we are sustained in the idea that there was a semi-reasoning process—or, indeed, a remarkable degree of intelligence, inherent in the species. So varied are these evidences, that we can only account for them by supposing that, instead of being the effect of general power of Instinct, their actors are governed by, and their peculiarity arises from, the structure of the brain in the individual. If the physiological law, that wherever there is a healthy brain, there is also a manifestation of mind, and *vice versa*, pertains throughout the animal kingdom, then we can conceive of no mental operation distinct from that viscus. Hence we would refer their general similarity of character to a similarity of cerebral structure; and their peculiarity, to a peculiar organization which produced it. As in mankind we have all grades of character, so in birds we have like various grades—only that the differences are so slight that our attention is seldom arrested. We recognize such a power as instinct, but it must be referred to the brain, and must exist in man, and indeed all animals, alike with birds.

The operation of the reflex nervous system in frogs and other animals, by which they are enabled to move and perform many curious feats of locomotion after being decapitated, may be regarded as the simplest form of nervous action—it being, *seemingly*, not much removed from the effect of galvanism upon the nerves. There is another and higher order of action—that of the voluntary nerves, whereby motion is regulated by the brain, and is under the control of the will. We then arrive at the function of the brain itself—at the spontaneous action of the organs themselves—which is a primary mental operation, that we may designate as *instinctive*. The child which, without instruction, seeks its mother's breast, from a feeling of hunger, obeys the instinctive impulse of Alimentiveness. A person with large Individuality constantly gazes around him, from an *instinctive* desire to *observe*. These instincts, or primary impulses, belong to animals and to the feathered race. They pair, build nests, and sing, from the impulse of the *inherent faculty*. If, then, we regard the primary function of a phrenological faculty as instinctive, we shall readily explain the phenomena of bird-life, because they possess the cerebral organs.

Now, a process of thought is a combined and continued operation of all or a part of our impulses; and in proportion to the strength of the original feelings and desires will be the power of the mental operations, which, by combination, become so intricate and rapid, that we can no longer trace them back to their origin. Reason, conscience, and the higher faculties, though instinctive in their sphere, are secondary in character—depending on certain data for the basis of their operations. Man's instincts being of a greater number than those of any other creature—adding their great power, and wonderful action and reaction—the influence of the controlling and regulating powers of his mind—all the effects of *impulse direct* are completely obscured. Where the instincts are less and their strength quite limited, and where no *controlling* power is recognized, as in birds, their action is direct and uniform. But the bird, by the perfection of its brain, may possess to some extent a *power of combination*, and thus occasionally astonish us with something approximating to reason itself. The ordinary emotions exhibited by a child are easily understood; but a result elaborated by a process of thought in a great mind, disciplined to estimate ten thousand influencing circumstances, is rarely at once comprehended. In proportion as the instinctive faculties of birds are capable of improvement by education, they manifest a degree of understanding resembling our own. They may be educated to talk as the parrot; or will learn to sing another's song, as the bob o' link.

We shall not attribute to man all the instincts of insects and the lower animals; for they are endowed with native desires unknown to him; yet their impulses seem to be regulated by the nervous system, for their forms are as wonderful as their desires are peculiar.

Space will not permit us to enter into an extended application of our theory to the explanation of the minor phenomena of animal life. But we feel confident that this view of the subject of Instinct, placing it upon physiological grounds, will serve to explain a great deal which was heretofore involved in general terms.

JOEL SHEW:

HIS PHRENOLOGICAL CHARACTER AND BIOGRAPHY.

PHRENOLOGICAL CHARACTER.

The above is not a good likeness of the late lamented pioneer of Hydropathy, but is the best now at our command. We are fortunately able to give his phrenological character from an actual examination made a few years ago.

Dr. Shew possessed naturally a strong constitution and great physical power, inherited from long-lived ancestors. Few have a greater degree of energy and endurance. He was active, industrious, and when in health, untiring. He had a large brain and a strongly-marked character. His faculties did not always act in concert, partly on account of the excessive development and activity of some of his organs, and partly from the lack of early and systematic mental discipline. All his social and domestic organs were large, which, with his large Benevolence, rendered him an affectionate and devoted husband, a kind father and a warm friend. His Continuity was rather moderate, and his Combativeness and Destructiveness large; hence his energy, enterprise, and versatility. He was frank, open, and familiar, (perhaps to a fault,) prompt, resolute, firm, self-reliant, strictly honorable, true to his principles, and independent in action. Veneration was large, and he possessed more deferential and devotional feelings, perhaps, than appearances seemed to indicate, but had no great respect for creeds and forms. Causality and Comparison were both large, which gave him great ability in tracing relations between facts, and deducing laws therefrom. Form, Size, Order, Calculation, and Locality were large; Eventuality was full; Language was large. The smallest organ in his head was Secretiveness, which was marked *three* on a scale of seven. His head measured twenty-three inches. His chief mental defects were—lack of spirituality, restraint in speech at times, cautiousness, economy and continuity of thought and action, and a tendency to overdo, resulting from the undue development and activity of some of his organs.

BIOGRAPHICAL SKETCH.

Joel Shew was born at Providence, Saratoga County, New York, November 13th, 1816, and was consequently, at the time of his death, nearly thirty-nine years of age. He was the oldest of a family of eleven children, of Godfrey I. and Betsey Shew.

His father was of German, and his mother of

English extraction, remarkable for their moral worth, piety, and neighborly kindness, especially to the sick. His progenitors were distinguished for health and longevity, which our subject seems to have inherited in an eminent degree. He early exemplified an active mind and retentive memory, and his subsequent course of study fully realized the expectations of his friends.

At an early age he was accustomed to use cold water and snow, to allay the inflammation of a wound or burn on himself, and, by instinct, was self-taught in the "Water-Cure." In 1843 he graduated as a doctor of medicine, having previously studied very thoroughly not only the Allopathic but the Hydropathic system. He followed the dictates of his early feelings and habits, and adopted the system of Priessnitz, which he had himself, in no small degree, discovered, while ignorant of its acknowledged founder. His friends endeavored to dissuade him from the adoption of the unpopular system; but his ardent love of what he believed to be true, joined with that courage, perseverance, and energy which so strikingly marked his character, impelled him onward, feeling that the system was God's truth, and must triumph. He has been justly regarded as the pioneer of Water-Cure in this country. He was very successful in the treatment of Disease, and equally so as an author of popular works on Hydropathy and kindred topics. His published works are: "Hydropathy, or Water-Cure;" "Water-Cure for Ladies;" "Water-Cure Manual;" "A Treatise on Consumption;" "An Essay on Tobacco;" "Lectures on Cholera;" a work on "Midwifery and Diseases of Women;" a work on "Diseases of Children;" and "Hydropathic Family Physician." To the literary labor of preparing the above works must be added that of writing monthly for the *Water-Cure Journal*, besides contributing largely to other serials and periodicals.

Dr. Shew visited Europe at two different times, principally for the purpose of concentrating every possible improvement in the water treatment as practiced in the different Hydropathic institutions in the old world, and of studying at Graefenberg with Priessnitz, the great founder of the modern Water-Cure. These facts exemplify that ardent desire to excel, that disregard of bodily exposure and mental labor, indomitable energy and perseverance, prodigality of money in a good cause, all of which form so striking a feature in his character, as developed by phrenological and physiological science.

The city of New York has been his principal field of operations. No one before him had ever undertaken to carry the water treatment into a general city practice, side by side with the old modes.

Dr. Shew died at Oyster Bay, Long Island, on Saturday evening, October 6th, 1855; and his death has already been widely announced by the press. The sad intelligence was unexpected on the part of the public and the numerous readers of his writings, who heard and knew of him only as an active working man and zealous physician. But by his particular friends and more intimate acquaintances the event was not unexpected.

For several years it has been evident to them, as it was *felt* by Dr. Shew himself, that his lease of life was short at longest—*how* short was not in human wisdom to determine definitely. Yet, like most persons who have the care of invalids, and are at the same time occupied with many and various complicated and arduous duties, he said but little and manifested to the casual observer but little of his own ailments.

Some fifteen years ago Dr. Shew was engaged in the daguerreian business. The art was then in its infancy, and the motives for caution in the use of iodine, bromine, mercurials, and other poisonous drugs, were not as well understood then as now. He got his system badly impregnated with minerals, as also did a brother of his who died several years ago from their effects. Many others lost their lives and health in the same way. But by turning his attention to medical science, Dr. Shew had a motive, strong as the love of life, to be unprejudiced and impartial. He abandoned at once, as unphilosophical, the idea of curing diseases in the same way that his had been produced, viz., taking poisons into the system.

A little over a year ago he was reduced so low that he contemplated relinquishing business. His medical friends expected he would soon die. But a more rigid application of his own system, with the all-important rest of a few weeks, restored him to comfortable health, or, rather, to working ability, for another year.

A *post-mortem* examination, made by Dr. G. H. Taylor, of this city, and Dr. Fry, of Oyster Bay, revealed the organic and fatal nature of the malady. The liver was very much enlarged (hypertrophical), weighing two or three pounds above the healthy standard. It was adherent extensively to the diaphragm, while old adhesions were also found to exist between the lungs and pleura, all evincive of previous and long-standing chronic inflammation. The gall-bladder was deficient, and the bile ducts shriveled away. The enlarged liver pressing on the second stomach (duodenum), explained one symptom (stricture of the bowels), which the patient had complained of frequently for many years, and which had often confined him to his room.

CARL MARIA VON WEBER,

HIS PHRENOLOGICAL CHARACTER AND BIOGRAPHY.

CARL MARIA VON WEBER.

PHRENOLOGICAL CHARACTER.

The above cut clearly indicates a predominant nervous temperament, which, in its influence on the mind, gives an elevated, refined, susceptible, and intense tinge to all the mental manifestations. The possessor of this cast of organization has ecstatic feelings, pure desires, and ethereal conceptions. Weber's physiological conformation, as will be seen by his portrait, was not perfect, for the brain absorbed all the vitality which the vital functions manufactured; so that the physically enduring and living systems were not adequately supplied with the nourishment necessary for their uniform invigoration and development.

It would seem that Weber's distinguishing phrenological trait arose from the lower range of the intellectual faculties, which were very large. All the perceptive faculties being large, gave him the facility to accumulate a vast amount of information and practical knowledge, and, no doubt, were the main channel through which his peculiar gift developed itself. The organ of Tune was not only prominent, (which is seen to be very large in the engraving, though the artist had no reference to the phrenological developments when he pencilled it,) but several faculties conspired to aid its perfect development. Thus, Order enabled him to arrange and systematize his compositions. Weight, furnished the ability to judge of the momentum required to create any given tone, while Time contributed materially to produce harmony and precision. But we would not be warranted in attributing to an individual possessed of these qualities, unaccompanied by other influences, superior musical gifts; yet as this portrait represents large Ideality and Sublimity, and a temperament peculiarly adapted to generating thought and emotion, we are led to conclude that such a combination would not only be able to conceive and develop unusual genius in some artistic direction, but infuse into his creations a great amount of enthusiasm and spirit.

He possessed a good degree of executiveness.

BIOGRAPHY.

Carl Maria von Weber was born in 1786, at Eutin, a small town in Holstein. His father, who was a violinist of some note, gave him a liberal education, and enabled him to cultivate his talents for music and painting, between which his inclinations seem, in his early years, to have been divided. His ardor in the study of painting, however, abated as his mind became more and more engrossed by his love of music. After he had acquired great skill as a pianoforte player, his father placed him under the care of Michael Haydn, brother of the illustrious Joseph Haydn, and himself a celebrated composer in the ecclesiastic style. His first work, consisting of six "Fughetti," or short figures, was published in 1798. In the same year, he went to Munich under the instruction of Mr. Kalcher, to whom he

ascribes his knowledge of counter-point and their ready application. Under the eye of this master he composed an opera, a grand mass, and many instrumental pieces; all of which were afterwards committed to the flames. The art of lithography, recently invented, attracted his attention; attempts to improve it occupied him for a time, but he soon returned to his musical labors.

At the age of fourteen he composed the opera "The Wood Girl," which was first performed in Nov., 1800, and received with applause at Vienna, Prague, and St. Petersburg. The whole of the second act was composed in ten days. His second opera was "Peter Schmoll and his Neighbors," which had little success. He soon after became acquainted with Abbe Vogler, a learned musician, and for two years devoted himself to a severe study of the great masters. He then received the situation of Chapel-Master at Breslau; during his residence, he composed an opera called "Rubezahl; or, Number-Nip," the celebrated spirit of the Hartz Mountains.

In 1806 he engaged in the employment of Duke Eugene of Wurtemberg; here he composed several symphonies and other pieces of instrumental music. He also remodelled his opera of "The Wood Girl," and reproduced it under the title of "Sylvana."

In 1810 he composed "Abu Hassan," which had considerable success.

In 1813 he was employed to reorganize and direct the opera at Prague. He then went to Dresden, and established the German opera in that city. This situation he held until his death. At Dresden he composed his far-famed "Freischütz," but did not bring it out there; but at Berlin, where it was first performed in 1822. It was received with enthusiasm, which rapidly spread over Germany, and at once raised the author's name to the summit of popularity; nothing but the airs from it were heard even in the streets of the smallest villages. In July, 1824, an English version of it was produced at the English Opera House in London, and was played many nights to crowded houses.

In 1822 he produced "Preciosa." This was very successful all over Germany. The attempts to adapt it to the French and English stage, however, failed.

In 1823 the opera of "Euryanthe" was produced at Vienna, and received as warmly as "Freischütz." It was, however, not so warmly received at Berlin.

In 1824 he undertook to compose an opera for Covent Garden, and "Oberon" was written for him by Mr. Plauché. It drew good houses, but was not as popular as "Freischütz."

Weber was laboring now under a severe pulmonary disease, which had been aggravated by travelling, and which terminated his life on the fifth of June, 1826.

APOTHEGMS.—No man should acquire the art of reasoning sophistically; it perverts the judgment.

There are two classes of religious persons; one worships the principles of his religion, and his God; the other worships the forms of religion: this class persecutes all who disregard the forms of religion. The other class pities those who disregard the principles of religion.—*Sylvester Genin.*

ALCOHOL AND FOOD.

BY G. H. TAYLOR, M. D.

THERE are two principal positions from which the advocates of "teetotalism" derive their chief arguments in its support. One is the material and social consequences that follow the use of alcoholic drinks; and the other, the physiological incompatibility of such beverages with the harmonious exercise of the functions of the system. Those pursuing the *first* line of argumentation, find in statistical tables and facts connected with the social and intellectual well-being of a community, overwhelming reasons for the disuse of such drinks. All, or nearly all those arrangements for concerted effort, for the purpose of restraining intemperance, that have shed upon community so wholesome an influence, reaching every mind not absolutely laboring under a moral paralysis, have grown out of this class of issues. As an ultimate expression of them, we have the embodying of the will of the body politic in the form of *law*, intended to protect community from the abuses that a voluntary insanity of a portion of its members is liable to inflict upon it.

The *second* line of argument, or those derived from physiological and chemical science, has, wrongfully we believe, been treated as subsidiary to the first, whereas the facts and inferences or demonstrations thus derived, should have, as they are naturally entitled, equal or superior prominence. The whole matter really rests on the broad basis of science, as the expression of the true relation of material things. Bad moral conditions are but an outgrowth of physical inharmony; the cause and the correction are to be sought at the fountain-head.

In treating this subject, the conclusions of science have usually been sought, not in its basis of stern facts, but in the deductions of a false and illusory experience. Men who have practiced moderate or intemperate drinking, have lived to a greater age than some who have been strictly abstinent, and the abstinence has been inferred to be a cause of shortened life. The fact in regard to the matter is, that the duration and enjoyment of life depend on so many circumstances, embracing parentage and all the conditions that go to maintain the physiological integrity during its course, that it is quite impossible to isolate a single act or habit, and estimate by any comparison its exact value, by symptoms that follow as the effects of a combination of causes. We must resort to a science back of that derived from transient feelings and false impressions, consisting of a more elementary data; otherwise we shall be in danger of drawing false conclusions—such as have already exerted a baneful influence upon society. In seeking the aid of science, we should be careful not to accept its counterfeit, as we often may from its speciousness.

A writer in a late number of the *Westminster Review* proposes to himself to discuss the teetotal question upon its scientific merits, aside from other issues. He undoubtedly has apprehended the true point upon which satisfactory arguments and conclusions must rest. We agree with him here. But wilfully or ignorantly, he attempts to mislead his readers by a perversion of scientific facts, and still more by the confident and insinuating eloquence with which he enforces his erroneous reasoning. His missiles are aimed at a no less conspicuous target than Dr. Carpenter, the well-known physiological writer and author of a prize essay on the use and abuse of alcohol, and proposes to extinguish all the lesser lights on this subject with the downfall of the greater.

Dr. Carpenter argues the *essentially poisonous* nature of alcohol, from the fact that it must, from its chemical nature, possess such physiological relations as to disturb the regular current of vital actions. The amount of such aberration may, with the use of small doses, be imperceptible; it may not be distinguished from disturbances that depend on physiological causes, as mental and physical excitement, which are not incompatible with the maintenance of a due integrity of function. It is easy here to blend effects so apparently similar; and our author, in affirming their identity, labors to show that the *causes* are similar, and that alcohol is a legitimate—not excitant—but *aliment* of the system. But, for the time, the mode in which the nervous system and the feelings are affected by small doses, or the less pleasant consequences of larger ones, should be left out of sight, or our judgment becomes obscured, as is the reviewer's in regard to the essential nature of the relation. Hence, the comparison of spirituous liquors with mutton-chops or bread and butter, that may nourish or kill according to the quantities taken, is not relevant. It must first be shown that in small quantities alcohol is salutary from its nature, and its relation to the tissues and to the wants of life. But the idea of *poison* being attached to alcohol, places it under a ban of prejudice. It goes down less smoothly. To give it the proper smack it must receive a new christening, it must be called *food*, "respiratory" food. This attempt to confound things so dissimilar, confers upon the reviewer the peculiar obliquity of vision and confusion of ideas, that naturally flow from the nature of the article in question. But by persistently echoing the term food, it may become accepted as food; and if food, not a luxury merely, but a *necessity* of life.

But what is food? It is in the understanding of this term that our author misapprehends the teachings of science, and opens the way for erroneous arguments and a false conclusion. He says food performs three offices; 1st, the repairing of the waste of tissues consequent on the wear and tear of life; 2d, the furnishing of fuel for respiration, the source of animal heat; and 3d, through both of these means, he asserts, it becomes a generator of force.

While it is unnecessary at present to dispute the first and second propositions, the third requires a critical examination, for it is here that the sophism is chiefly found. "The end and aim of food is force," but to accept this as a definition of food would both include and exclude many things that do not pertain to food, and it therefore fails from a total inadequacy to describe its object. "Alcohol is capable of pro-

ducing animal heat in the organism, it is therefore food and a generator of force." The peculiar complexity of this jingle of argument gives it at first sight a somewhat specious appearance, but a little consideration renders the cheat so apparent, as to lead us to think it might have been intended.

In speaking of *force* and *heat* we are to recollect that we are to understand these as related to vital objects. Considered in this relation, it is plain to us that food is neither *force* nor *heat*, but that these qualities are particular attributes of vitality, or of modes of its manifestation; that not food, but certain conditions implied by organization, are the causes of the phenomena in question. Food is one condition, but only one of many employed in producing these effects; and although neither force nor heat would be produced in the body without food, they also would not be produced with it without the corellation of the suitable conditions. It is plain that heat is not force in the body, and however important its presence, its uses are *not* those to which it is applied in the steam-engine, when the self-repellant power induced by it among the particles of matter is rendered available. Animal force is quite independent of, and distinct from the elasticity of vapors or extension in the bulk of solids. It is true the manifestation of vital force in the animal is accompanied by a certain fixed temperature which differs widely between the higher and lower grades of animal life, but this temperature is a condition for the act of organizing, and is even true of the plant. There are many other conditions, as the presence of light, moisture, and air, that are inseparable from organization, but we do not confound these with force. If heat is force, then fever, surely, is excessive force, and we ought to hear this class of patients complain of too much strength. Then, also, all conduction or radiation of heat from our bodies is a prodigal waste of so much force; and when the great Architect of our bodies decided that its functions should be performed at an average temperature of forty degrees above that of objects with which it is in relation, He failed to display the wisdom universally seen in His works.

But no: vital heat is quite distinct from vital force. The latter is always manifested through or by special instruments of organized matter. Food is not force, for a plant is fed and grows, but neither thinks nor acts. Force in the animal body is somehow eliminated by its changing tissues. The immediate cause of this change of tissues is their contact with the oxygen of the blood; the production of heat is only incidental. But when oxygen acts on the *unorganized* constituents of the body or blood, *heat only* is produced and *not* force. The forces of the body are by no means measured by its heat-generating capacity. But the amount of force, intellectual and physical, of which the body is capable, does depend directly on the capacity the system has to *organize* the instruments of force or repair waste tissues. Vital dynamics, then, are related to the tissue that changes; vital heat, to the elements of the body, both organized and unorganized that become *oxydized*—the unorganized portion by no possibility giving rise to force.

Having found that force and heat in the animal body, so far from being identical or convertible, are at best but indirectly related, it will be readily seen that any cause that facilitates the production of the one, need not increase the evolution of the other. Heat being *added* to the body is only expended in vaporizing moisture when it is excessive, and *abstracted* from the body, causes no decline of its force, till the decline reaches below the point at which organization proceeds.

Nobody supposes that alcohol can by any possible transmutation be converted into organized product. Hence, neither it nor any of its parts can ever become an instrument or medium of vital force, in the sense in which food may metaphorically be deemed such. Alcohol is already a product of destruction, and cannot be reduced back to those gradations of substance from which it proceeded; but, on the contrary, its tendency to further decomposition, by its affinity for oxygen, is stronger than the materials that make up the substance of the body. Its peculiar physiological relations flow from these qualities. But though alcohol may not serve in the development of organized structures, which are the only instruments of vital force, may it not serve as "respiratory" food? The reviewer imagines that the division of food by chemico-physiologists into *nutrient* and respiratory kinds, serves his purpose remarkably, and he chooses to rest the burden of his argument here. It is true that heat in the body is a coincident of respiration, let the material of change or its product be what it may. But it by no means follows because materials taken into the system become oxydized and disappear thereby, that they are therefore alimentary, and the normal supporters of function. Combination with oxygen is often the readiest mode whereby substances thus introduced can have their noxious qualities destroyed, and become eliminated from the system. By this means such matters are reduced to the uniform and innocuous compounds of carbonic acid and water. Alcohol, it is true, has the advantage of many poisons, of being thus decomposed and excluded from the body with tolerable facility, when in small quantity, owing to its chemical relations. But all other ternary and even quenternary organic compounds, whether friendly or antagonistic, meet with a similar disposition; though many are more or less refractory, and so exert a more marked poisonous influence. Thus opium, pepper, quinine, or strychnine may be wholly or partially destroyed by this means in the body, as their effects are transient, though violent. But because the body uses them, or they are used in the body, they are not *therefore* to be included in the category of foods. Our reviewer thinks that *quantity* will determine the nature of the effects, and that alcohol disagrees as beef-steaks may, only when in large doses. We think *quality* has something to do in deciding the matter.

According to these notions of the learned and discriminating reviewer, when his physician prescribes the above-named or similar substances he is only changing his diet, if the doses are in moderate and usable quantities. We think the Genius of Hygiene will be startled at the announcement!

The amount of injury that a poisonous material will do, will bear an inverse ratio to the facility with which it may be removed or destroyed by such means as the system supplies for this purpose. Alcohol possesses the advantage over all other poisons in the facility with which it is thus destroyed, so the system seems to tolerate what in reality is repugnant. Otherwise it would be inevitably and utterly virulent. That it is, or may be ultimately converted into carbonic acid and water, does not prove that as alcohol, and in its intermediate relations, it is not pernicious. But it gives heat; so do all other substances, vital or unvitalized, normal or detrimental, in just the relative proportion in which they require oxygen. Heat-making is incidental, and by no means determines the nature of the substance that assists with oxygen in affording it. It is no evidence of sagacity to discover that such substances are, therefore, food. It is to be recollected in this connection, that the most careful scrutiny into the phenomena of heat-making, in the body or out of it, serves to indicate that this principle is dependent on the oxygen employed in its liberation, since the amount generated has a relation to the quantity thus employed.

Another very common blunder the reviewer has fallen into, is the very shallow inference that because poisons occasion the exhibition of animal *force*, that they are themselves the vital agents. It is this confounding of appearances, coincident with their use, that has ever been a source of medical imposition and of disaster to the race. The force must be dependent on organization, let whatever other circumstance intervene that may; and the cause of its exhibition may be any incitement to tissue-change, healthy or not. Poisons destroy, directly or indirectly; the indirect destruction *may* eliminate the force of which the tissue is capable. Any substance that procures an *abnormal* destruction of tissue, whether pertaining to the voluntary or the involuntary departments of the system, is virtually poisonous in its effects. Alcohol does this, therefore it is antagonistic and poisonous in relation to vitality.

The *rationale* of the use of alcohol is somewhat complex. There is no doubt but that the heat to which it accidentally gives rise, prevents the use of those matters of food designed for this purpose. In doses of this kind, the effect has not been inaptly compared to that in a fireplace with a limited supply of air—there is an imperfect combustion, the most incombustible parts of the fuel being only partially destroyed, and rises up in masses of thick, black smoke; for carbon requires a stronger heat for ignition than hydrogen. The flues become choked with deposits. Two noxious effects are here clearly traceable; the retention of matters normally supplied for certain requisite purposes that are injuriously retained, for the alcohol is eliminated instead; and the production within the vital domain of intermediate chemical products capable of producing poisonous effects. It is even questionable in our mind whether alcohol intoxicates at all. In small doses it is rapidly de-

stroyed, and only *stimulates*, as do many other substances; in large doses it rapidly *destroys* life, from its chemical relation to living tissue. But it will be noticed that intoxication is a phenomenon into which *time* enters as an element—and during the process there is a combustion of alcohol *with a limited supply of oxygen*, consequently it is not completely reduced to carbonic acid and water. Two proportions of hydrogen may be taken from a part of it, producing the peculiar, unstable, and, to the senses, suffocating compound, *Aldehyde* [Alcohol=C_4 H_6 O_2; Aldehyde=C_4 H_4 O_2; Acetic Acid=C_4 H_4 O_4].

An imperfect oxidation of alcohol may be effected by exposing its vapor to platina heated to blackness, or by covering its flame with a wire gauze; the products, as indicated by the odor, are nearly identical with those of the breath of the hard-drinkers, and consist of a mixture of alcohol, aldehyde, and acetic acid. The conclusions of science, then, plainly are, that alcohol, though susceptible of destruction in the system, is *no food*; for it cannot by any change be converted into elements of structure, or made susceptible of any permanent residence in the system, as may the compound preceding it, in its group of substances; and though heat is produced in the process nature uses to destroy its direct toxological quality, the same fact exists, though perhaps to a more limited extent, as respects many other acknowledged poisons. It also appears that so strong is its affinity for oxygen, to effect its complete or partial destruction, that this element is withdrawn from its normal use of *sustaining the functions* of vitalized tissues, whereby their action becomes irregular or wholly suspended, producing the various phenomena of intoxication. Neither brain or muscle can act when deprived of their supply of oxygen. They both reel, for the force eliminated by their normal change is suspended. But our author has derived an argument for its use from the fact that it prevents waste in the body; that is, saves food. But this saving of food is not performing the office of food. In other respects it bears no analogy to food. It is pungent, food is bland; it withdraws water from the tissues, food is conveyed by water to all parts; it prevents waste, food supplies waste. It is converted into intermediate products of great power, those from food are innocuous; it is indigestible, food is digestible; it makes a man a fool in the proportion he uses it, food makes him strong.

Having satisfactorily, to his own mind, established the position that alcohol is food, our author suddenly changes his tack to defend its use by proving the necessity of *stimulants*. We have before heard of its use as combining food, drink, and *lodging*, but never of the *necessity* of its triplicate, or even of its duplical function. "Life is possible only under the influence of constant stimuli." We had supposed that *aliment* was of the most consequence. Common experience and common sense teaches that life cannot be continued for one moment purely in virtue of stimuli. A stimulus is something that causes vital expenditure without adequate remuneration. An extraordinary impression over-does and exhausts nerve function, while a normal one affords it the requisite condition for development. Under the best regulated condition in which alcoholic mixtures can be used, they can only cause a more rapid and thus abnormal destruction of vital forms, and so cause a sudden and transient evolution of vital force.

This idea of the *need of stimulus* is a universal cause of the prostitution of all the senses. We never saw one thus enamored of some darling recourse of this order that was satisfied. And the deeper he sips the Circean cup, the greater his torment. Nature did not design that the forces of life, those which can spring only from organic development as a primal cause, should be thus frittered away, yielding only the most transient, and seldom a glimmering of the higher pleasures.

650 *Sixth Avenue, N. Y.*

SHAPE OF THE WORLD.

[Condensed from Life Illustrated.]

At a meeting of the American Geographical Society, held at their rooms in the University, Dr. Hawks in the chair, Mr. Kohl, the celebrated German traveller and author, exhibited to the Society his unique collection of maps relative to this country, and gave many interesting explanatory remarks respecting them.

In regard to the shape of the earth, he exhibited maps illustrating the various opinions of different ages, and their modifications by various circumstances. Jerusalem was generally considered to be the centre of the world; southerly ran the Red Sea, with a bridge across it, where the Israelites were supposed to have passed. In correspondence with the prevalent idea respecting its color, this sea was painted red. Westerly was the Mediterranean Sea, sometimes of an irregular shape, and often quadrangular. At its extremity, the water grew darker and darker as it became more and more unknown, and somewhere in the distance was supposed to be the infernal regions. At the eastern extremity of the map was a *terra incognita* into which emptied four rivers, whose origin was from Paradise, which was indicated upon the map.*

These maps, in the gradual development from year to year, expanded in different directions. The Mediterranean Sea took a more natural shape, and ended with the Pillars of Hercules, or the Straits of Gibraltar, and was delineated by two pillars. Later, the Western shores of Spain, Portugal—the coast of Africa—then imaginary and traditionary islands to the west. These, subsequently discovered, appeared on the maps as the Azores afterward. At the time immediately antecedent to Columbus, the maps indicated other islands still farther westward, derived from legends and traditions, but which, unlike the former, received a name—that of the Antilles—which was subsequently given to islands discovered somewhat later.

Still farther to the west was a waste of waters, peopled by monsters of the imaginations, dragons, etc. (which our German friend styled dragoons), and which were supposed to interfere with the adventurous sailor, for also might be seen ships crushed by these monsters of the deep, depicted with sufficient horror upon these maps.

Many early cosmographers represented the world as round, but few have left their reasons for such a supposition. Some, however, so imagined it from the shadow of the earth upon the moon in its eclipses. But religion affected the views of geographers—and we have scriptural statements respecting the uttermost corners of the earth—the four corners of the world. Now, as corners are difficult to imagine upon a circular body, the map was made to correspond with the idea of four corners. From this absurdity knowledge had got back, and about the time of Columbus the opinion was again promulgated that the earth was round.

Maps were first represented as if the world was a plane, and the paradise at one end was as far as conceivable from the infernal regions at the other extremity. The globular form of the world soon came up—heaven rose above the world and hell went within it, in a geographical point of view, and the extreme east and west were united in idea, if not in reality. The suddenness of this conviction, combined with the entire ignorance of the character of the portion of the planet forming this united portion, excited the imaginations of the map-makers of these times, and accordingly we have some of the most curious designs upon the charts made at that period.

The maps heretofore made on one surface were now divided, and two spheres and globes made to correspond.

Soon, however, came the knowledge of the rotation of the world upon its axis, and accordingly we find the maps of that time made with the figures of angels above and below, turning a crank, and thus mechanically causing this rotation.

* At a more recent period, the navigator who first discovered the Amazon and sailed up its broad stream, published on his return a map on which he delineated with sufficient accuracy the result of his observations, but stated that it was one of the four broad rivers—which were some centuries previously depicted upon the eastern extremity of the maps, already mentioned—that flowed from Paradise. The excited voyager further added, that he had approached sufficiently near to the region to behold from a distance its gorgeous resplendency.

Tobacco—An Honest Confession.—A subscriber, J. W. B., in Lenox, Ohio, says:

"I am an inveterate user of tobacco, and wish to abandon the filthy habit; but have not courage enough to attempt a reformation. Seeing your advertisements of 'Prize Essays on Tobacco,' I am induced to send you the specified amount (15 cents) for a copy, with the view that the arguments therein set forth, may strengthen me in my resolution, and give me courage to emancipate myself from its manifold slavery."

We congratulate our "anxious" friend, and have no doubt his good "resolution" will be amply fortified by the irresistible arguments set forth in "The Prize Essays" which we send to him. When converted and restored, will he not set about converting others? He may find tobacco-using sinners—real sinners against the laws of God and Nature, in all the walks of life, in every calling, in high places and in low places—sinners who preach to us, who pray for us, teach us, doctor us, legislate for us, fight for us, work for us, live with us, sleep with us, and—— Well, we never slept with a tobacco-box, and we pray the Lord we never may. Somebody says, "Natural waists or no wives"—we say, "Total abstinence from *Tobacco*, or no husbands." Young America, do you hear *that*? We hope to hear from our Anti-Tobacco friends. Why not start a new Home Missionary Society, whose duty it shall be to convert the heathen "*at our own doors*," in our own houses.

CRIMINAL LEGISLATION AND PRISON DISCIPLINE.

BY GEORGE COMBE.—CHAPTER IX.

Remarks on table of punishments, &c.,—A higher education needed for officers intrusted with the charge of convict prisons—More military talent and experience not sufficient—Chaplain's education also defective in relation to prison duties—Difference of spirit of treatment between the Rev. Mr. Burt and the Rev. Mr. Clay, both chaplains to prisons—

There is nothing to indicate that the 993 convicts not punished during the year are dangerous or irreclaimable.

We have classified the offences for the sake of remarks:—

Class I. Includes offences which *might* spring from the best feelings of our nature—the social affections, suffering under deprivation of their accustomed stimulus, and which do not *necessarily* indicate a depraved nature.

II. Indicates a light and merry disposition in some, and bad temper in others.

III. Implies stubborn and insolent dispositions, combined with a degree of depravity, and in some individuals strong sexual passion.

IV. Implies depravity of disposition attended with violence of temper.

V. Indicates the propensities of acquisitiveness and secretiveness predominant, with deficient conscientiousness.

VI. Indicates morbid action of the brain.

The number of *repetitions* of punishment on the same individual affords an index of the degree in which he is corrigible. Those here punished 4, 5, 6, 7 and 8 times within the same year would probably never regain their liberty, under the system of voluntary labor in association. The men who deserved 3 days, 7 days, 13 days, and 14 days in a dark cell, must by nature be highly stubborn, determined, and probably dangerous characters, who would be a scourge to society after being four years in such prisons as Portsmouth or Dartmoor, in habitual association with men of their own stamp; unless, indeed, what is not improbable, some of them were men of strong minds barbarously treated, who defied their tormentors by an obstinate endurance of their inflictions. An examination of their brains, taken in connexion with the details of their offences, would throw the light of day on the causes of that obstinacy.

Did we not know the deplorable state of psychological science, and the inveteracy of established ideas and practices, we might feel surprise that such tables as these do not lead to an attempt at discovering the real nature of the men who are thus dealt with, and the causes that have led them into crime, with a view to adapting the treatment to their individual natures and circumstances. Even on the principle of vindictive punishment, nothing can be more cruel, unjust, and unnecessary, than to inflict on the man, probably of fair average dispositions, who has been exposed by neglected education and adverse circumstances to fall into crime, the same extent of suffering which is considered due to the convict of depraved and violent propensities, manifested in a long career of guilt; yet a time-sentence to Portland or Dartmoor, consigns both individuals to the same fate. It is the same ignorance of psychological and physiological science which allows the mistaken notion to prevail, that good conduct manifested under rigid military discipline in a prison and in isolation from social temptations, affords any index of the degree in which self-command and the power of moral restraint from internal motives and convictions have been acquired, which last alone can fit a convict to return to society. Mr. Tufnell justly remarks, that in England there are no men to be found systematically trained to the moral management of convicts, such as are found in Germany and other countries. It is the bane of the English system of government throughout, that it does not render the public service, in its various civil departments, a series of professions, for which men must be specially educated and trained; and the great English universities, in consequence, do not educate young men for any pursuits on earth except those of a gentleman or a scholar. In a speech delivered at Winchester, on 16th December, 1853, Lord Ashburton gave a true and graphic representation of the state in which English education has left the English people. "In this *progressive* country," says his lordship, "*we neglect all that knowledge in which there is progress*, to devote ourselves only to those branches in which we are scarcely, if at all, superior to our ancestors. In this *practical country* the *knowledge of all that gives power over nature, is left to be picked up by chance* in a man's way through life. In *this religious country the knowledge of God's works forms no part of the education of the people*—no part even of the education of a gentleman." If, at this moment, the Home Secretary, desirous to try the experiment, even in one prison, of a reformatory discipline, founded on the physiological-psychological principles here recommended, should address a circular to the heads of each of the universities, containing the following questions, we should be curious to see the answers:

Question First—Do you recognize, in your academical instruction, any connexion between the mental functions and the bodily organism? and what is the nature and extent of the connexion?

Second—Do you teach that the size and condition of any particular portions of the organism, influence the natural power of the mental functions? And if so, will you specify the special portions of the organism and the particular mental functions thus connected?

Third—Could you name to the Government young men of good character and ability whom your instructions have rendered practically familiar with the connexions before stated, to such an extent that they could undertake to apply the principles of physiology and psychology, in classifying prisoners, in selecting employments fitted to their several capacities, and in modifying, within prescribed rules, their treatment, in conformity with their bodily and mental qualities?

If the science of man's nature has attained a practical development in the universities, these questions could be triumphantly answered. If not, the Government will do well to inquire into the cause of the uselessness of the mental science there taught.

In the naval and military departments of Government service, a degree of preparatory education has been required. The engineer officer must possess scientific knowledge to direct him in the practice of his art, and even officers of marching regiments must undergo educational examination; but to treat a human being who has infringed the criminal law, no special education is considered necessary. The person selected as governors of prisons, are generally military men, chosen on account of their ability to preserve discipline, and force compliance with prison rules, irrespective of their possessing any knowledge of physiology, psychology, or moral and social science. We beg to be excused for again introducing Lieut. Austin's conduct at Birmingham as an illustration of the practical consequences of this ignorance in the governor of a prison. When Lieut. Austin was not satisfied with a convict's work and behavior, he tightened the axle of his crank-wheel, and condemned him to turn it an additional number of times; and because he failed to do so, he diminished his food and nearly deprived him of sleep, hoping by these means to force him to execute the task in future. He apparently contemplated subduing a stubborn will, when the thing he had to contend with was a feeble body. The deprivation of food and sleep would increase the weakness; but when on the next day the task was not accomplished, the governor resorted to strapping the man to the wall for many hours, and keeping him erect by a high stiff collar round his neck; thereby increasing his suffering, but again diminishing his strength, and this as a means of compelling him to work out his prescribed amount of labor. Apparently he was wholly unconscious that his own treatment was rendering it physically impossible for the convict to perform what he required. This case affords an example of the evils of appointing a man of a stern nature (for such Lieut. Austin's conduct bespeaks him to be), ignorant of the plainest principles of physiological science, and apparently equally so of other branches of knowledge bearing on the nature of man, to the government of a prison. A proper education of prison officers alone will afford a guarantee against the recurrence of similar outrages on prisoners. The mind and body of a man are certainly as complicated, delicate, and important objects, and at least as difficult to train, as the body of a horse or a sheep; and yet what lord of the turf would commit his race-horses to the management of untrained grooms, or what farmer his flocks to shepherds drafted from the ranks of the army or navy, who had never seen a sheep except on its way to the shambles?

Capt. Maconochie exposes forcibly the error of the notion which leads to these military selections. The object of military discipline, says he, is to sink all self-reliance and individual action, and to produce out of discordant elements, a compact, powerful, homogeneous instrument, which the commanding officer may wield at pleasure; whereas the object of prison discipline is to discover the minutest elements of individual character, to develop the good and suppress the evil, to direct the whole towards beneficent objects, and thus, as far as possible, to produce self-reliance and the capacity of virtuous individual action. The military officer trains the recruit to rely on his officers for food, clothing, lodging, and rules of action, sinking his whole individual soul in obedience; whereas the aim of the prison officer should be to enable the convict to acquire the skill and conduct necessary to provide these for himself, and to act wisely and beneficially for himself and others, when no counsellors are present except his own conscience, judgment, knowledge and experience. How skill in the former system of training should qualify a person for best conducting the latter, we cannot discover. When combined with the other necessary requirements, a capacity for maintaining discipline would be a valuable addition to the qualifications of the governor of a prison, and we object only to its being viewed as the grand desideratum in such a functionary.

The other chief officer of a prison is the chaplain; and if we ask how his education has fitted him for his duties, we shall find, as a general fact, that at the University he has been taught Greek, Latin, mathematics, and theology; but that physiology, psychology, social science, and the art of training men, were not considered necessary for his vocation. In reading the reports of chaplains, we see the natural character of the individual, and his peculiar theological creed, shining through every page of his descriptions of prisoners and modes of treatment. Mr. Burt, for instance, says: "The Divine Master of the human heart has not disdained to deter from vice by the revelation *of the impassable gulf and the unquenchable fire*. With the imprisoned criminal, in default of higher motives, the repression of the lawless passion is aimed at by the severity of penal inflic-

tions, and of that severity duration will be a most influential element; only the discipline which constitutes the punishment, while lasting, must be *effective*."—p. 56. Here, then, we have hell fire and its endless duration proposed as an example to instruct us in prison discipline. In Birmingham gaol Lieutenant Austin carried this example into practice in the most efficient manner, and the result was the suicide of some of the prisoners. When we contrast the spirit which characterizes this principle of prison discipline with that which pervades the inestimable reports of the Rev. John Clay, the chaplain of the Preston House of Correction, how widely different the two appear! Mr. Clay, in his Report for 1851, gives a table of recommittals, and observes that "recurrence to disorder and crime is almost inevitable, when corrective means are applied for such short periods as seven or fourteen days;" and he adds, that "*within that year*, recommittals, connected with *Sessions* cases, *happen* to be more numerous than they have been since the introduction of better discipline,—five persons having been twice tried within the year: but here, again, due investigation will too clearly show that *nothing better could have been expected*. My '*prisoners' character book*' contains the following minutes of each case." Here succeeds an exposition of the cases: "J. S., aged 10 years, is described as a child infamously neglected by his father," &c. "R. S., aged 18, grossly ignorant, and apparently incapable of any moral perception," &c. "R. C., aged 20, extremely ignorant," &c. "J. R., aged 30, a discharged soldier; miserably ignorant, and associated with the worst characters in the neighborhood." "J. H., aged 43, an incorrigible drunkard, whose first felony was committed in 1836; all his offences being the direct result of intoxication."—p. 10. Mr. Clay's reports are highly expository of the *causes* of crime in so far as these consist in the ignorance and unfavorable circumstances of the accused. He gives us the following table, "as the result of a careful examination of each man and boy committed to this prison." It is "*intended to show the ignorance of male prisoners on the commonest subjects, as compared to their knowledge of the exploits of celebrated robbers*—the centesimal proportion being calculated on the 286 Session cases and 1353 summary convictions."

	Sessions.		Summary.	
	No.	Per cent.	No.	Per cent.
1. Unable to name the months . . .	151	52·6	914	67·5
2. Ignorant of the name of the sovereign.	159	55·4	958	70·8
3. Ignorant of the meaning of "virtue," "vice," &c.	144	50·2	985	72·8
4. Unable to count 100	16	5·5	421	31·1
5. Acquainted with the exploits of Turpin and Jack Sheppard . .	206	71·8	365	26·9

Mr. Clay also quotes scripture:* "If," says he "severity is justified by showing that rulers are appointed by the Almighty '*to execute wrath upon him that doeth evil*,' it ought also to be remembered that 'He is not willing that any should perish, but that all should come to repentance.'" So confident is he of the efficacy of a rational system of prison discipline in producing reformation, that he assures us: "There is good reason to hope that when more earnest attention is generally paid to the treatment of criminals, the number of those who may be restored to liberty, after having been subjected to proper discipline at home, but who, under other circumstances, might have been transported, will scarcely equal the number of convicts *now returned* into the population from abroad. In fact—instead of receiving yearly from the hulks, and the colonies, a certain number of dangerous and hardened '*returned convicts*,' about the same, or a less number of *corrected* offenders would be discharged from well-ordered prisons in this country."—p. 21.

Mr. Clay is a *strenuous advocate of an improved system of national education* as the only rational preventive of crime, and of moral appliances in prison to supply it where neglected.

After noticing the decrease of crime among the working population of the mills, he adds: "But the most striking fact to the credit of the 'mill hands' comes into view when we observe that the greatly reduced rate of committals from their class coincides with the operation of an Act which, shortening the hours of labor, secured some hours for mental and moral improvement to every wise and well inclined mill-operative."—p. 20.

Both Mr. Burt and Mr. Clay draw their principles from the Bible; both earnestly desire the reformation of the offenders; and both to some extent recommend the same means of treatment, yet the *spirit* which pervades their views appears to us to be widely different. While Mr. Burt apparently sees in hell fire and its endless duration an instructive lesson for the management of convicts, Mr. Clay finds a rule for his imitation in the text, "God be merciful to me a sinner." We look for the source of these differences in the natures of the men. If their brains were compared, (and we have never seen or heard any report concerning the head of either,) we venture to believe that a perceptible difference in the development of certain organs in the base and top of the brain would be discovered between them. But be this as it may, can it be compatible with the public welfare that this great department of civil administration should be characterized by severity or humanity, in a great measure according to the temper of the individual who happens to be selected as governor of each prison? Should prisons not be managed rather by men educated in the sciences (physiology and psychology) which bear directly on the duties to be performed, and trained to the application of those sciences in practice? It may perhaps be objected that there is no evidence that the governors of the successful prisons before described were skilled in science and trained to their offices; and we admit that such is the fact. But those officers appear to have been men of a peculiar genius, which qualified them, as if by natural intuition, for the duties they undertook. Such men are capable of arriving, by direct perception, at results which ordinary persons can reach only through instruction, or can discover for themselves only after long processes of experience and reflection. No national system of administration can proceed safely on the *intuitive* perceptions of average men, and geniuses do not so much abound as to insure the nation an adequate supply of them. Hence arises the indispensable necessity, first, of fixing the *object* of the treatment; secondly, of ascertaining the *principles* on which it shall be conducted; and, thirdly, of training officers to carry these into practical effect. Moreover, as no stream can rise higher than its fountain, until the Government shall not only require a proper amount of knowledge, but select from those possessing it the individuals characterized by the highest physiological development of body and brain, they will not have done their complete duty to the country and the convicts.

By the Act 4 Geo. IV., c. 64, § 31, in England every prisoner has a right to be visited by a minister of his own persuasion, if he object to the gaol chaplain; and by a rule, certified by the secretary of State, Jews who may be sentenced to hard labor are not compelled to labor on their Sabbath. It is proposed to extend this rule to Scotland. This is all that can be desired by prisoners on the head of freedom of conscience.

When convicts are liberated on tickets of leave, and restored to society, they should be placed under the *surveillance* of a *special* police till the expiry of their sentences. The convicts residing in towns should be compelled to report themselves monthly, if not oftener, before a police-officer established specially for this duty, and if employed in the country, before the nearest magistrate or clergyman, and he should explain how he is employed and where he resides. Failure in making such reports should forfeit the ticket of leave. The country magistrates and clergy should be furnished with printed schedules, bearing the questions to be answered; and these should be transmitted by them to the nearest police magistrate charged with the superintendence of convicts. A special officer devoted to this duty would be necessary in the chief town of each district of the country, and he should be bound to act as the friend, adviser, and moral supporter of all convicts who were anxious to do well, and not as the mere legal spy over their conduct. The well-disposed should see in him a humane and enlightened friend, and not an enemy and a tyrant. The better class of convicts, thus treated and supported, would serve as valuable auxiliaries to the preventive, as well as the detective, police. They would know more than any other class of the haunts and habits of the criminal population, and, by their explanations of the sufferings of a prison, and their moral suasion, might exercise a salutary influence in restraining them from crime. They should not be induced to become spies and informers: but they might be legitimately encouraged to give information in occasional circumstances, when by so doing they could prevent a great evil by enabling the public authorities to ward it off.

We do not present a plan of detail for carrying our *own* principles into effect, because the public mind is still too far from acknowledging their soundness to render this necessary. But we shall conclude by offering a few practical remarks. The judicial sentence might continue to be recorded *in time*, in proportion to the offence, but rendering the minimum not less than one year, and subject to the condition of fulfilling the requisites of the prison discipline, without failure, until the expiry of the sentence. Certain acts of omission, or commission, in prison, should cause the term of the sentence to commence anew, or to have a certain number of months or years added to it, by which means the incorrigible prisoners would condemn themselves to perpetual imprisonment. Of course only serious, repeated, and unmistakable offences, should have these consequences attached to them. The classification, employment, and instruction of the prisoners, which we recommend, has been already sufficiently indicated; but we may add, that we should propose to instruct them in cerebral psychology, that they may know specifically their own mental defects as abnormal individuals, which most of them really are, without in the least being conscious of it; and social economy, that they may comprehend the relation in which their own qualities and attainments stand to the natural laws by which all social interests are regulated. No one who himself understands these subjects, and has conversed with prisoners, can doubt the importance of teaching them these branches of instruction. A convict, like most other people, believes his own mind to be a normal type of that of the rest of mankind; he believes his powers of perception, feeling, and judgment, exactly to resemble theirs; and he is unconscious that he is actuated by some desires, views, and judgments, which are widely different from those of normal men. We conversed with an intelligent criminal in prison, awaiting his trial, who was subsequently executed; and he stated that in his thefts and robberies he was only bringing the lofty down, and equalizing the gifts of fortune, and that he succored the poor out of the wealth that he plundered from the rich. The gaoler said he believed that this last statement was substantially true, because the prisoner really was generous in assisting the destitute out of the produce of his crimes.

* Chaplain's Report on the Preston House of Correction, 1852.

WHAT TO EAT, AND WHY.

NO. 4.

BY A PHYSICIAN.

We continue the consideration of the most important *alimentary principles* found in the different forms of food.

III. Fat, or Oil.—The composition of the various forms of oleaginous material is well understood; but the same cannot be said of the relations of these substances to one another, as parts of our food. The probability seems strong, however, that for all the purposes of the living system, these bodies are equivalents of each other. That is, although Stearine, Margarine (called by Johnson *Palmitine*), and Oleine differ somewhat in the proportions of the different atoms composing them, and the fats of butter and fish-oil differ from these still more, yet facts seem to indicate that either or all of these may serve the same ends in supplying the wants of the system; and hence they are most likely convertible, the one into the other, according to the nature and wants of the animal employing them.

No matter what vegetable or animal fats the fish feeds upon, they alike become Phocenine (seal-fat) and Oleine, in his tissues. So the Greenlander gets Margarine from food containing Phocenine and Oleine; the cow changes all the fats she feeds upon to the three most common forms, for her tissues, and to the very unlike butter-fats for the secretion of milk she furnishes; and we, in turn, reconvert the latter into Margarine and Oleine for our own tissues, as we do also the harder Stearine found in most animal fats, and abundantly in the fat of the ox and sheep. For it would be preposterous to say that a man in healthful condition would not *fatten* by consuming butter and suet; yet when he has laid on his fat, it is no longer either butter or suet, but a mixture of the same two fats which make up the edible fixed oils of all vegetables! Thus, as Chemistry roundly affirms (and we see no reason to question it), *human fat* is *vegetable fat;* and the fact would be a strong argument in favor of exclusive vegetable food, did we not know equally well that the *un*-vegetable, distinctly *animal*, fat of the ox, is but the vegetable product transformed,—that our own vegetable fat is often animal fat *re*-transformed,—and that, unless olives, walnuts, and like oily foods should come into universal use, even the animal fats found in milk, butter, and eggs could not be excluded from our diet, without reducing it to a standard fit only for the unintellectual, ready-warmed denizen of the tropics, or the muscular boor, whose capacity does not rise above the level of "hewing wood" and digging ditches. Where is the writer, the philosopher, the statesman, or the ruler, who has left profound or brilliant proofs of great intellectual power, who, while abjuring animal flesh, as many such have done, wholly abstained also from milk, butter, and eggs? For although Pythagoras, one of the most illustrious men that ever lived, is usually cited as recommending and using a purely vegetable diet, yet Ovid represents him as sanctioning the use of *milk;* and this is the more probable when we remember that, among the ancients, "milk and honey" was the very ideal of an innocent, healthful, and pure sustenance. Indeed, if oleaginous vegetables could wholly take the place of milk and eggs, it is still a question whether the former can furnish, in sufficient quantity, the *phosphorized fats* (or even free phosphorus, as part of the "raw material" of these), which are the indispensable requisites to perfect brain-nutrition, or brain-action.

In view of the principle already laid down, that the different fats and oils are convertible materials, and hence possessed of a common value for purposes of the animal economy, we shall not make our statement of the sources of fat in food unnecessarily tedious, by speaking separately of its various forms.

The following enumeration will denote the quantity of any or all varieties of this material found in each substance named. Of fatty or oleaginous matter, then, fine wheat flour contains about .02, bran of wheat .06, oatmeal .06, Indian corn meal .08 to .09, rice, beans, peas, etc., a very small amount, dates .002, linseed .22, plums .33, almonds .46, cocoa-nut (fleshy part) .47, walnuts .50! olives (whole) .32, filberts .60! Minute quantities of fat are found in most other vegetable substances.

Of animal foods, lean beef contains of fat .03, and when dried .07; but the amount of this material associated with the lean flesh in the form of masses of fat, greatly enhances the above percentage. Thus, butcher's meat will average from .07 to .14 of fat, while fowls generally contain less, venison and veal always less, and pork generally much more. The fact that wild game—animals in the natural state—have less fat than domestic animals prepared for the market, should teach us a useful lesson; and so also the fact that of all domestic animals the hog takes on the most. Of fish, the skate has .03 of fat, the haddock and herring .08, the salmon .22, and the eel .56. Yolk of egg has .28, the proportion in the whole egg being, according to Johnston, .10½. Milk has of fatty matters .03, and when dried .23; human milk, according to the analysis of Henry and Chevallier, has slightly more fat—according to that of Johnston, slightly less. Cheese contains much fat (butter), and the quantity increases with age.

How the phosphorized fat of the brain is formed, is not known; nor whether the human system has the power of causing the union of phosphorus with common fats, to produce this substance where it is needed. At all events we seem to depend for our supply chiefly on milk, eggs, and like foods. Yet if the cow can produce this fat as the needful constituent of the brain of her young, still more must the human mother produce it for the more active brain of the infant; and if this be true, why may not all systems be capable of forming this brain-fat, as well as the mother's? That all should be, seems very reasonable; and yet it cannot be denied that the use of *eggs*, and of milk, and more especially *cream*, in moderate quantities, does give an impulse to brain-action, which seems to be lacking where these aliments are wholly withheld. So the question of our dependence on *animal products* for one of the most important and noble elements in the composition of our whole body, is still an open one. We hope the experimental chemists and physiologists will soon enable us to form an intelligent decision of it. Cholesterine (bile-fat), Serolin (serum-fat), and the *volatile fat* of the blood which gives to this fluid in each species of animal the odor of the animal itself, differ from all the foregoing varieties. But the first of these seems to be an excrementitious matter, and of the uses of the others very little is known at present.

IV. Sugar.—The allied forms coming under this head are Cellulose or Lignin (woody matter), Starch, Dextrine (starch-gum), Cane-sugar, Grape-sugar, and possibly we should add Liver-sugar (hepatic sugar).

Perhaps a few words farther may be in place here, in regard to *types* and *allied forms* of food. We term Albumen a *type*, because of a certain whole class of alimentary principles, it is the most abundant, and applied to the greatest variety of uses in the system, and hence the *most notable* of its class. Besides, into it, in human digestion, all of its class are converted; and from it, in human assimilation, many of its allied forms are re-produced again. Among edible fats it is more difficult to fix on a type, if we are guided by all the principles above stated; but if we take *universality* alone into account, the real type of the fats should be Oleine. Of the fourth group, Sugar is taken as the type, on physiological grounds. It is the ultimate form into which digestion resolves all the other matters of its class. It has universality, then, through animal action, though not through vegetable production. Of the fifth class, Malic Acid (the acid of apples) is rather a *sample* than a *type;* but besides being a form of fruit-acid which is almost universally consumed, it also affords a very fair representative of its class. The fruit-acids are very numerous, and not necessarily convertible into each other in the human system. In the sixth class Water stands alone. It is both type and class. In the seventh class, minerals, no perfect type can be found; for chemical elements and compounds are neither convertible into each other, nor can any single one of those found in animal and vegetable juices and tissues be said to be of universal occurrence and importance, unless, indeed, it be Phosphate of Lime. This, therefore, may well be selected as the type of its class.

By *allied forms*, therefore, we shall understand those forms of aliment which serve similar purposes, or the same purpose, in the animal economy; and which, in some of the groups, are all convertible into a single nutritive form of matter.

It has been the opinion of dietists that Gum and Vegetable Jelly (Pectine) should have a place in the class of sugars, as serving the same purposes in the economy. But many will be surprised to learn that neither of these are, in any discoverable amount, digested or absorbed,—that they pass from the alimentary canal in a dissolved, but otherwise unchanged state. This opinion tallies well with the fact that these substances act as demulcents to the mucous coat of the bowels, when in an irritable state; but it leaves little hope to the physician from their use in urinary diseases. At all events, we have stated what now appears to be the result of careful experiments lately made by some of the best European chemists. We would suggest, however, that these assertions must apply only to *true gums*

and not to the *starch-gum*, which is taken largely as food.

Let us see. Expose starch, mixed with water and a very little sulphuric acid, to a boiling heat, and it soon becomes a perfectly soluble gum. This is starch-gum; and the process carried on, soon gives to this the form of grape-sugar. Long-continued heat also gummifies starch, in a greater or less degree. Now, we are told that while wheat-flour has about .04 of gum, the same, after exposure to the heat of baking, contains .18 of gum. Is this true gum?—and so indigestible? If so, the baking of bread entails a very great loss of alimentary material! But starch-gum is merely a *stage* between starch and grape-sugar. This last is the end of digestion of starch; and hence starch-gum itself is doubtless digestible, and in its final form absorbable. So, too, Sago and Tapioca are but starch, partially gummified by being heated to a high temperature on metallic plates. Now, we apprehend this, too, is starch-gum, so far as formed, for otherwise, according to the new doctrines, sago and tapioca are not alimentary, and their use is but waste consumption! But we think the Malay, who subsists largely on sago, and the lover of tapioca puddings, will be loath to admit this conclusion. The loss of material in the form of vegetable jellies, though less, must still be considerable. But perhaps the indigestible, but mechanically soothing jelly, is necessary to shield the mucous membranes against the abundant woody fibre and acids of the summer's vegetables and fruits.

Perhaps in no other direction has chemistry opened up a series of more curious and interesting results, than in connection with the substances of the class we are now considering. Perfect grape-sugar, and more than weight for weight, may be formed from paper, or clean old linen or cotton rags!—wood may be made bread! Autenrieth of Tubingen, by soaking out of wood everything soluble, reducing it to powder, and repeatedly heating it in an oven, converted it into a flour like wheat-starch, which formed a jelly, with water, fermented with leaven, and made a "uniform and spongy bread." By the action of sulphuric acid, this wood-flour, as also ordinary sawdust, is converted into sugar.

The changes that can be made in the articles of this class, are always in the order in which we have named them at the head of this division of our subject; never the reverse. First, wood may be changed to starch. Then, starch, whether that naturally formed in grains, or that produced by the artificial process, may be changed to Dextrine, or starch-gum. Next, any starch-gum, naturally or artificially formed, may be transformed into (probably, first) cane-sugar, and this, or starch (certainly at the last) into grape-sugar. Here, out of the body, the process ends. But in the body, it begins one step later, and to compensate for this, as we may say, goes one step farther. Thus, over wood, when taken, as it is, in most vegetable foods, the digestive fluids have no power; but if starch, dextrine, or cane-sugar is eaten, these all alike pass through the necessary forward movements, and become grape-sugar before, or soon after, entering the blood. At this stage, however, they do not halt; but in the liver, through which all the blood of the intestinal capillaries must pass on its way to the lungs, they become further changed into a sugar, which, having found it in some chemical characters different from all others, although very nearly like grape-sugar, Bernard has called *liver-sugar*. This final form is supposed speedily to be decomposed under the direction of alkali in the blood and the oxygen of the air, and by its combustion having afforded to the body its quota of animal heat, it then escapes from the lungs, skin or kidneys, in the forms of *carbonic acid and water*. And here the task which it was the plant's life-labor to perform, of generating a supply of *organic* material, is all undone, and the dissevered elements go forth again to invite new plants to the work of recombining them, for the use of new animate existences, and for a new destruction. And this is one instance of the brief but endless cycle in which revolves the whole grand pageant of Life!

But these onward metamorphoses of starch-compounds occur in the assimilation of the plant's juices, as well as in animal digestion. The starch-gum of vegetable saps, and the starch of unripe, tasteless, or bitter fruits, become converted into cane or grape-sugar. Where the sap or fruit contains no acid, the final form is Cane-sugar; examples of which are also seen in Beet-sugar, Date-sugar, Maple-sugar, and Corn-sugar. Where the sap or fruit contains acid, the plant's action ultimates in the production of Grape-sugar; and this, with the attendant conversion of much of the acid itself into the same sweet, is the philosophy of the agreeable change in fruit which constitutes its *ripening*. What is called Grape-sugar would be more correctly termed termed *Fruit-sugar*, since it is found in nearly all ripe fruits, as well as in many nuts. Varieties of this are Honey-sugar and Starch-sugar.

Since starch and the different sugars thus far named are to all intents equivalents of each other in our food, we shall include them all in a single estimate. The following will be found to be very nearly the exact amounts of what may be called, indifferently, the Starch or Sugar-group of aliments. In a few instances true gum or starch-gum, in small amount, is included in the estimate; and in regard to these the reader is referred to what has been already said on this head. Of starch, etc., there is found in

Fine wheat flour, about,		.65*	Wheat-bread,	about,	.49
Bran of wheat,	"	.60*	Rye-bread,	"	.43
Oatmeal,	"	.67*	Peas,	"	.36
Corn-meal,	"	.73	Garden-bean,	"	.34
Rice,	"	.84	Figs,	"	.78
Rye-meal,	"	.61	Potatoes,	"	.18
Barley-meal,	"	.67	Yam,	"	.13
Pears (of sugar),	"	.08	Iceland moss,	"	.44
Peaches,	"	.16	Cherries (of sugar),	"	.18
Cow's milk,	"	.04	Beet-root,	"	.09

Woman's milk, about .06].

The subject of the sources of vegetable acids, water, and the different minerals of the blood and tissues, are left for the next article.

* These amounts are below those given by Johnston, as it seems evident that his statement of the amount of gluten is too small for American flours, and hence, of starch too great. The most that can be expected is a close approximation.

NEW YORK

Wholesale Agency.

THE frequent application from our country friends to transact business for them in New York, has induced us to effect arrangement with the leading houses for the purchase and shipment of every variety of merchandise and produce. We will select, and forward by express, or otherwise, dry-goods, groceries, and so forth, to any person or place. The advantages of such an agency are simply these:

1st. We are acquainted with the principal importers, manufacturers, and dealers. And

2d. Residing in the city, we are always on the ground, and can have the advantage of the best opportunities for buying goods for shipping in large or small quantities at each and every arrival or departure.

3d. Saving the expense of time and passage-money to the purchaser of a trip to the city, his hotel, and other expenses, while away from home. We have business connections with Boston, Philadelphia, and all the principal American cities; also with Liverpool, London, Paris, etc., etc., etc.

When goods are ordered, remittances in checks or drafts—payable to our order—should accompany the same. Please address, FOWLER AND WELLS, Wholesale Agents, 308 Broadway, New York.

PARTICULARS.

Agricultural Implements—Such as ploughs and harrows of every variety and make, cultivators, mowing machines, reapers, thrashing machines, hay-cutters, seed-sowers, corn-planters, corn-shellers, road-scrapers, hoes, shovels, forks, rakes, hand-mills, etc., used on the farm or plantation.

Mechanics' Tools and Hardware—Such as axes, hatchets, hammers, nails, screws and screw-drivers, augers, gimlets, chisels, planes, drawing-knives, saws, hand cross-cut, buz, etc.; all tools used by architects, carpenters, joiners, masons, tanners and curriers, shoemakers, tailors, printers, &c.

Surgical and Dental Instruments of all kinds, in cases. Tooth-keys, teeth-forceps, tooth-punches and screws, lancets, files for separating, mouth-mirrors, in frames, tooth-hooks, gold foil, tin foil, etc., etc.

Musical Instruments of all kinds, piano-fortes of any preferred manufacturer harps, melodeons, guitars, flutes, trumpets, drums, fifes, horns; also music in sheets or bound, and musical instruction books.

Artists' Materials—Prepared canvas, any size; mill-boards panels, paper in blocks and sheets, oil colors in tubes and powder, brushes, of all kinds for oil and water, palletz, easels, maul-sticks, knives, glass slabs and mullers, artists' boxes, all water colors, in cakes or boxes; soft colors, in tin boxes, from three to twenty-four colors each; pencils of all grades and qualities.

Books—In every department of literature, history, biography, theology, agriculture, domestic economy, architecture, voyages and travels, school-books, dictionaries and works of reference, essays, belles-lettres, art, science, and natural history, poetry and the drama, medical and surgical science, illustrated works, geographies, etc., etc. In short, all works in print.

Stationery—All sorts, sizes, and qualities of printing papers; and the very best wove and laid letter papers, foolscap, billcap, Bath post, commercial post, packet post, folio post, demi medium, commercial note, Congress, royal laid and wove, super royal do., colored and glazed papers, ruled and unruled, gilt and plain edged, etc., etc.

Jewelry—Gold and silver watches, telescopes, spy-glasses, spectacles, mathematical instruments, plated ware, spoons, forks, tea sets, sugar-tongs, etc., etc.

Groceries—Sugars—loaf, lump, powdered, white and brown, for family use, and preserving syrups of the best qualities, molasses, sugar house and other kinds. Rice, hominy, cocoa, spice, nutmegs, cinnamon, pepper, allspice, cloves, etc., etc., and every article sold by grocers. When bought in quantities, at wholesale, these family stores may be laid in at much lower rates than by retail. We will fill orders, however, by the cargo, or in lots to suit purchasers.

Dry-Goods—Cloths, cassimeres, vestings, brocade, plain and watered silks, satins, black and colored, black silks, French muslin, lawns and jaconets, printed and plain delaines of every style and color, shawls—Broche, Thibet, Crape and woollen—linen and cotton sheetings and shirtings, blankets, quilts, flannels, table-cloths, napkins, and toweling of every kind, cravats, gloves, hosiery, silk and merino under-garments. Also, carpets of every pattern and style; beds and bedding.

Goods will be "*Insured*" if desired, and shipped by express or as freight, by canal or railway, by river, lake, or sea, to all the States and Territories, also to the Canadas, the North American Provinces, or to any place on the globe.

All orders should be plainly written, with full shipping directions, and the amount remitted in checks or drafts, properly indorsed, payable to our order, and addressed as follows:

FOWLER AND WELLS, Wholesale Agency,
308 Broadway, New York.

GYMNASTICS

AS A PART OF EDUCATION.

Our schools, academies, and colleges, as at present conducted, are deficient in some of the most important instrumentalities for creating a sound mind in a sound body. Indeed, they are guilty of misdemeanors and high offences against the majesty of human nature, from which they can be exonerated in part only on the plea of ignorance. But in nature, as in the State, ignorance excuses no one, and hence we witness a large number of those who entered our seminaries of education with high hopes of improvement and usefulness returning ere long, it may be, with the most brilliant honors and prizes of successful competition, but shattered in health, the hectic planted on the cheek, and dyspepsia or bronchitis fastened as a chronic habit upon the vital organs of life. Only one institution, and that, unfortunately, is a military one, can honestly boast of sending forth its alumni stronger and healthier than it received them, fully armed and equipped with better than shield and spear for life's great struggle, even with the panoply of a vigorous sheating of muscles upon a rock-like groundwork of bone, operated by untrembling nerves and steadily-beating pulse. But what a pale, cadaverous, and prematurely aged set of youths are assembled as graduating classes, even in our most venerated universities! Oh for a touch of the Olympic games, rather than this pallid effeminacy! Oh for a return to the simple Persian elements of telling the truth and hurling the javelin, instead of the bloodless cheeks, and fleshless limbs, and throbbing brains of our first scholars in Harvard, Yale, or Princeton! But there is a medium, doubtless, between the ancient and modern discipline, by which we might secure the benefit and exclude the vices of both. And until some measure of this kind is adopted, we must continue to have our hearts agonized by the spectacle of brilliant scholars dragging out a miserable existence in unstrung and dilapidated systems, the mind, with all its tastes, faculties, and energies, tuned like an angel's harp, and performing all its fearful and wonderful operations to a charm, while its earthly companion seconds its high functions in the feeblest manner, and jars and grates with its crazy aches and ills in harsh discords amid the sublime concert of intellectual and spiritual harmonies. In truth, how many a glorious idea has been still-born from physical prostration! How many a fine rhyme has come halting off from the blunted sense of an aching brain! What bitter drops of gall have flowed from the pen of the dyspeptic! What dark views of human nature, and what censorious estimates of character, have been shaded by the sombre gloom of the jaundiced eye! What insane theories and morbid tastes have been engrafted on the stock of literature by the non-digestion of a dinner, or a twinge of neuralgic pain! Such, to be sure, are the magnificent resources of the mind, and its daring spirit of independence, that it will often vindicate its inborn and indestructible capacity in spite of disease and pain, reign lord of the ascendant, no matter how agonizing the tension of the nerves, and work on with almost preternatural energy, though sinews crack and blood-vessels burst; but how much more sound and beautiful would the masterpieces of literature have been, had they proceeded from healthy minds in healthy bodies, instead of being born, as has often been the case, of gin and genius, of fancy and headache, of blindness and seraphic imagination, of angelic fancy and a broken heart!

In the early history of this country, the Olympic games of our people were hunting, woodcraft, and Indian, French, and Revolutionary wars. The wild forests developed the muscles of our fathers, and cottage toil strengthened noble mothers of heroes and patriots. A hardy life in rural pursuits in the open air is still the mighty rampart of our nation against an army of diseases and the effemination of a whole race of men. But unfortunately, as our cities grow, as civilization waxes complex and luxurious, and the classes addicted to professional, mercantile, and sedentary life are multiplied, the physical stamina are in danger of succumbing under the fascinations of easy dignity, and busy idleness, and physical indulgence, even when free from the blight of vice. It needs to be rung into the ear of every educator, as with the peal of a trumpet, that the body cannot be neglected with impunity; that in its effeminated capacities the most morbid and monstrous passions will hold their saturnalia; and that only in its vigorous exercise and expansion, as well as in the development, culture, and equipment of the intellect, and the enriching and purifying of the heart, can the world have "assurance of a man." No school or college with any pretensions to be level with the spirit of the age ought to proceed upon the old system of drugging the intellect to satiety with knowledge, and leaving the physical and moral powers comparatively uncared for, since only as all the capacities are harmoniously unfolded, can any one of them attain its maximum of strength, usefulness, and happiness. The ancient philosophers can yet teach us many a lesson of high wisdom; but they can give us no more significant symbol of the fine balance of their systems than the lovely walks of the gymnasium, the arena of active sports for innumerable youths, musical with the voices of Socrates, Plato, and Aristotle.

Nor is the whim to be tolerated, that nothing will benefit the child in education, or the patient in disease, except what he fancies and likes, and that, if bodily exercises are distasteful, they will prove fruitless. The child has many a lesson set to learn against which he relucts, but the very energy called forth in overcoming his dislike proves a wholesome discipline to his forming character. And the patient must take many a pill which his soul loathes; but what is bitter in the mouth becomes sweet in the stomach, and matures into health in due time. So, in this office of the physical man, a walk, a game, a run, a ride, or a feat of strength, may not always accord with our inclinations; and if it does not, it will doubtless be entered into with the less spirit, and result in the less good. But it needs to be known, both by educator and physician, that exercise is good, however distasteful at first—that we cannot stretch out an arm or a foot, or walk, or run, or leap, without freshening the life-currents of the system, sending new flashes of electric warmth along the nerves and muscles, and scattering a cloud of those blue and black devils that buzz around the ears of poor, sedentary students, stayers at home, and women imprisoned in nurseries and amid their household cares. Dryden long ago sung:

> "The first physicians by debauch were made;
> Excess began, and Sloth sustains the trade.
> By chase our long-lived fathers earned their food;
> Toil strung the nerves and purified the blood;
> But we, their sons, a pampered race of men,
> Are dwindled down to threescore years and ten.
> Better to hunt in fields for health unbought,
> Than fee the doctor for a nauseous draught.
> The wise for cure on exercise depend:
> God never made his work for man to mend."

Many a poor, pining invalid needs but to shake himself free from the palsying incubus of imagined inability to move, and to plunge into the open air, Heaven's tonic bath of ether, and as he gets strength by gentle and judicious repetition, to mount a horse or to practice the gymnastic movements; and a sense of returning health would soon seat itself in every sense and limb. Many a wanderer to distant climes for health has a fountain of Hygiene in his own bosom, which needs but the magic wand of the gymnast to unseal it, and he would drink healing and vigor from its sparkling waters. Many a life is worn heavily and wearily away, a burden to the possessor, a sadness to friends, and a drawback from the happiness of society, which requires but the old homely prescription of Galen or Celsus to give it "beauty for ashes, and the garment of praise for the spirit of heaviness." Whatever may be thought of the theory of Kinesipathy as a mode of treatment for disease, we cannot doubt that the kneading processes of vigorous muscular movements, the invigoration of repeated exercises, the deepened inspiration and the quickened perspiration of rapid play with the Indian clubs or the dumb-bells, are the legitimate preventive and cure of a score of diseases. Nothing should be done rashly, or without the consultation and permission of one's physician; but with this proviso the way is clear. The use of drugs and medicines has but a limited range at the most—is an evil invoked to overcome a greater evil—one thief set to catch another. But the beauty and perfection of the gymnastic cure is, that it chimes in with the continued normal state of the body and creates health, while it is itself health.

We look to see, therefore, the old art redeemed from the foul uses to which it has often been put, and employed in qualifying man to act well his part, as a body made of the earth, and as a soul destined to immortality. Strength, health, and beauty are to be quarried out of the rich materials stored away in human nature by a bountiful Creator. The greatest and the best lie near us, and humble herbs grow at our door, that can calm the fiercest diseases. There is required but the application of a normal, natural education even to our dyspeptic, deformed,

and degraded race, to create new wonders of physical grace and vigor, equal to those of the Grecian time, adorned and sanctified by a coronet of Christian virtues never known to the Porch or the Academy.—*N. A. Review.*

THE STRUCTURE OF THE BRAIN.

BY G. W. KNAPP.

The substance of which the brain and nerves are composed is called neurine. "It is never found by itself, for it is too delicate in texture to retain its properties if it were unsupported. It is always supported and protected by the membranous fibre arranged in various ways."

"There are two kinds of neurine, differing in color, consistency, and microscopic character. The one is of a gray or ash color, and pulpy texture, as seen by the naked eye, and roughly examined; and hence its title cineritious, or pulpy neurine. With the microscope it has been discovered to consist of neucleated cells or vesicles, and therefore more justly denominated *vesicular* neurine. The other is of a pearly white color and fibrous texture; this is medullary or fibrous neurine."

"Under the microscope, the fibrous neurine is found to consist of tubes; and hence its present title, *tubular* neurine. * * Tubular or medullary neurine, though firmer than the cineritious neurine, nevertheless, in comparison with the other tissues of the body, is soft and yielding. * * If the fibres which compose the fibrous nuerine are examined with a good microscope, they will be found to have a peculiar and complicated structure. They are not simply solid fibres. They are perfect cylinders, varying in diameter from one-thousandth to one ten-thousandth of an inch. Their average width is from two-thousandth to four-thousandth of an inch. * * Professor Ehrenburg informs us that these fibres can only be discovered by the aid of a magnifying power of 300 diameters; and that he was sometimes obliged to have recourse to a much greater magnifying power, as 800 diameters, in order to bring them into view. * * They are all invested and supported by a distinct elastic homogeneous membrane. The neurine, which is contained within this membrane, consists of two portions, a central, which is probably the active portion of tubular neurine, and an outer or investing portion, which possibly acts merely as an isolater of the conducting central axis."

"Nerve-tubes never branch like blood-vessels, and never inosculate with one another, though they form loops at their origin in the nervous centres and at their terminations. * * A nerve-tube always performs one and the same office: it always conducts in the same direction, and the same kind of nervous power; not at one time carrying impressions which, on reaching the brain, become sensations, and at another time conveying orders to muscles to contract."

"*Vesicular or pulpy neurine* is much more vascular than tubular. Where its capillaries are well filled with injections, it appears under the microscope like a minute net work of countless blood-vessels. The neurine, which is deposited between the meshes of this intricate mass of blood-vessels, consists almost entirely of cells, with nuclei and nucleoli in various stages of development. The wall of every vesicle consists of an exceedingly delicate membrane, containing a soft, but tenacious finely granular mass. They are mostly globular, but not uniformly so. Some are caudate, and the tail prolongations are frequently long. * * Many of these cells are evidently of quite recent formation; so much so, that we cannot help observing the analogy in the microscopical structure of this portion of the nervous system and the secreting portion of the glandular system."

"A primitive cell absorbs from the blood in the capillaries the matters necessary to form in one set of instances, nerve, muscle, bone, if nutrition be its functions; milk, bile, urine, in another set of instances, if secretion be the duty assigned to it. The only difference between the two functions being, that in the first, the cell dissolves and disappears among the textures, after having performed its part; in the other it dissolves, disappears, and throws out its contents on a free surface. * * The ultimate secreting structure, then, is the primitive cell endowed with a peculiar organic agency, according to the secretion it is destined to produce."

"The nucleated cells of vesicular neurine are the active agents in the production of nervous power; they are developed, and perform their office in the same way as the nucleated cells. * * The cineritious portion of the nervous system stands in the same relation to the rest of that system as the secreting portion of a gland does to the rest of that organ, though one portion would be useless without the other. The medullary or tubular neurine appears to act simply as a passive conductor of the power generated by the vesicular neurine, not possessing any control over that power, not capable of acting upon it or changing it. Thus we find tubular neurine performing various offices:—

"1st. As conductors of impressions from the surface of the body to the brain—a *nerve of sensation.* 2dly. As conductors of orders to act from the brain to the voluntary muscles—nerves of volition. 3dly, 4thly and 5thly, The excitory motory nerves and commissures."

"The enormous quantity of blood which the vesicular neurine receives, affords strong evidence that this structure, like the acknowledged secreting organs, employs that blood in the preparation of a something. Indeed, the effect of arresting the cerebral circulation, shows most clearly that all the mental operations are dependent on the flow of the blood through the brain, for their production."—[Lolly on the Human Brain.]

Thus, from the anatomical structure of the tubular and vesicular neurine of the brain, we readily discover the functions of each. The vesicular or secreting portion of the brain, secretes the nervous fluid by which the mind manifests itself; and the tubular or conducting portion conducts it to the place where the impression is to be made. Each particular organ of the brain secretes a modification of the nervous fluid, peculiar to the duties and functions of that particular organ; and this, when conducted to the seat of the soul, or sensorium commune, produces a peculiar and specific impression. Where this seat of the soul is, perhaps, cannot be absolutely demonstrated, but it is altogether probable that it is at the union of all the nervous centres. As Haller expresses it, "It lies at the origin of every nerve, so that the concurrence of the first origins of all the nerves, make up the sensorium commune." It must be at the point where the two hemispheres of the brain are united, the *corpus callosum*, or there must be two sensorium communes corresponding with the duality of all the mental organs; which would appear somewhat probable from cases that have been recorded.

Dr. Abercrombie mentions a lady "who died suddenly, with scarcely a single symptom, and who was so well the evening before her death, as to have been at a dancing-party, *one half of whose brain was ascertained, after death, to have been completely destroyed.*"

Dr. Dods thinks that the nerves stationed along the arteries collect the electricity from the blood, which, "through them, is instantly conducted to the brain, and is there basined up for the use of the mind." This he conceives must necessarily be the case, because he can conceive of no other use for these nerves, which accompany the arteries but not the veins.

In his Philosophy of Electrical Psychology (page 61), he says: "I am well aware that the blood-vessels pass round among the convolutions of the brain, and through them the blood flows freely to give that mighty organ action, but in the nerves themselves there is no blood. They are the residence of the living mind, and its prime agent, the electric fluid."

There are ten times as much blood sent to the brain, in proportion to its bulk, as to any other portion of the system. This, the Dr. tells us, is "to give that mighty organ action;" how it does this he does not tell us; however, he *has* told us how it does *not* do it, and that, perhaps, he considers an equivalent. The only idea I have of the blood's promoting the "action" of any particular part is, that it carries to such part the nutriment required by it to replenish the expenditure which is constantly taking place. Each part of the system secretes from the blood whatever it requires for expenditure. The brain expends large quantities of the nervous fluid, and we infer from analogy, as well as its anatomical structure, that it secretes this fluid from the blood.

Professor Beach says: "From the organization of the brain we may infer that it is a galvanic battery, and that all the phenomena of nervous influence is produced by its action." To say that the brain does not secrete nervous fluid, because there is no blood *in* the nerves, is nothing short of sophistry. We might as well say the stomach does not secrete the gastric juice from the blood, because there is no blood *in* it. Strictly speaking, there is no blood *in* any part but the veins and arteries; in these it runs through every part; and in the capillary parts, where the arteries are transformed into veins, it imparts its nutrient properties to the system.

The stomach secretes from it the material of which it is composed, and also the gastric juice, by means of which the peculiar functions of that organ are discharged. In the same manner, the brain secretes from the immense quantity of blood sent to it, the neurine of which the brain is composed, and also the nervous fluid by which the mind manifests itself, which is thrown into the nerve-tubes similar to the gastric juice into the stomach. "Indeed," says Lolly, "the effect of arresting the cerebral circulation shows most clearly that all the mental operations are dependent on the flow of blood through the brain for their production."

Professor Beach says: "A person in Paris had received an injury of the brain from which he recovered, but left a portion of it bare. For a trifle, he would permit any person to press upon the exterior of the organ, when he would suddenly fall down as in a fit; as soon as the pressure was removed, recovery immediately followed." The brain is so nearly fluid that it is subject to the laws of hydrostatics; consequently, pressure upon one part would press with equal force upon all the parts, and thus arrest the action of the *whole*. It may, perhaps, be considered impossible, by some, that such a subtile substance as electricity can be secreted from the blood. Knowing, as we do, that electricity pervades all things, is it impossible, or even improbable, that the Almighty should have created an organ in the human system capable of secreting electricity, when the operations of the human economy require so vast an expenditure of this substance? If the nervous fluid was collected, as Dr. Dods supposes, by the nerves stationed along the arteries, and "basined up for the use of the mind," in the brain, the strength of the mental manifestations would be in proportion to the strength of the circulatory system; but this is not the case—it is in proportion to the power of the brain to *manufacture* the nervous fluid.

It would be just as plausible to suppose that *all* the nerves, which convey impressions *to* the brain, the auditory, optic, olfactory, nerves of sensation, &c., sent stores of nervous fluid to be "basined up;" but it is generally supposed that when it has once run along these telegraph wires of the system it has done its duty, and is cast out of the system as an effete substance. I will endeavor to answer Dr. Dods' question, "Why is it that nerves, like so many telegraphic wires, are laid along the whole arterial system in all its minute ramifications, but that none are laid along the nervous system?" These he calls "nerves of involuntary motion;" but it is a misnomer, if the office he has assigned them is correct. He should have called them electro-collectors, or something similar. Nerves of involuntary motion usually cause some motion of the parts to which they are sent, such as the heart to beat, the lungs to respire, &c.

I conceive these nerves to be simply nerves of sensation. They are the telegraph wires by which the different parts of the system send to the brain a knowledge of the temperature of each portion. The oxygen which enters into the blood at the lungs, when it is forced into the capillary vessels of the system, by spontaneous combustion with the carbon in the blood, produces the natural heat, or warmth of the body, and these nerves, by absorbing the electricity which is taken at the lungs in a free state, conveys a sense of the condition of the body to the brain; the temperature of the electricity being the same as that of the part from which it is sent. Were it not for these nerves, we never should feel chilly unless the atmosphere which surrounded us was actually cold, and *vice versa*. But this is not the case. Our sense of heat and cold are in a great measure independent of the surrounding atmosphere. We sometimes feel warm when the atmosphere on the surface feels stinging cold; then again, we will feel a sense of chilliness when the atmosphere is suffocatingly warm.

It is well known that electricity has a great affinity for moisture, and that a conductor must be isolated, or it will be absorbed. As already stated, the nerves proper are encased in an isolating substance, and they never inosculate, as the blood-vessels do. Each nerve is encased in a membranous sheath from one extremity to the other, where they are terminated by loops; for electricity will not run except upon a circle. There can be no effect produced upon them except at the extremity, while they are in a healthy state. The nerve that terminates in a papilla on the surface, or what is called "Pacinian Corpuscles, which in the human subject are found in great numbers in connection with the nerves of the hand and foot, in the mesentery of the cat they can be seen with the naked eye." These nerves are without this isolating substance in these Pacinian Corpuscles; the "central axis alone enters the central capsule. The envelope having, as it were, conducted the central portion to the door, leaves it, and stops outside. Thus we have, as Dr. Todd says, a natural dissection made for us." (Lolly, page 41). Consequently, they absorbe the electricity into them at the extremity, and it is conveyed to the other extremity. There are no side-tracks or switches for it to run off on to; but must run directly from the starting point to its terminus.

When a limb is amputated the nerve is severed, yet it still conveys an impression to the brain as though the limb was whole, whenever the end is irritated: finally, it becomes isolated at the end, and refuses to convey any impression at all. Were it not that the nerve-tube was without the isolating substance at the papilla, on the surface, it could not absorb the electricity from the objects with which it comes in contact; and were it not isolated between the extremities, the electricity would be absorbed by the moisture before it reached the brain, and no impression would be conveyed. And further, were it not that every part has its specific nerve to convey its news to the brain; or if one nerve conveyed impressions from all the parts through which it passes, there would be such a medley of confused reports at the sensorium commune that they could never be understood. It is absolutely necessary that every part should have its particular nerve; and, consequently, we see that it is equally necessary that these nerves should accompany the arteries to convey to the mind the knowledge of the temperature of the various parts of the system; without them we could know nothing of the temperature except at the surface.

That peculiar disease, fever and ague, has its seat in these nerves. They become deranged by the miasmatic character of the electricity absorbed from the blood, which is taken in with the oxygen at the lungs in a free state. It seemingly paralyzes their powers; they become deranged, and refuse to convey correct sensations to the brain. The patient may be said to be delirious in this respect, no matter what the actual temperature of the system is; when the ague is on, they refuse to tell any thing but "we're freezing, freezing!" These nerves are evidently the only ones deranged, for those from the surface convey correct impressions of heat and cold.

In the alternation of fever which succeeds the ague, these nerves probably convey correct impressions, as the system is actually at a fever heat. And so in all fevers, the system is at the actual temperature these nerves report. It is well known that psychologists are more successful in the treatment of fever and ague than almost any other disease. This is owing, undoubtedly, to its being located exclusively in the arterial nerves of sensation.

Considering this the true office of the nerves stationed along the arteries, the reason why "none are laid along the venous system" is perfectly obvious. The oxygen of the blood is consumed in passing the capillaries between the arteries and veins, and consequently no heat can be generated in the venous system. It were superfluous to station them there when there were no messages to be conveyed.

This theory does not interfere, in the least, with Dr. Dods' theory of the circulation of the blood by the positive and negative forces, or electrical action. That is a question entirely independent of whether the nerves along the arteries convey the knowledge of the temperature of the different parts of the system to the brain; or are stationed there to collect the electricity from the blood, and convey it to the brain to be "basined up for the use of the mind."

MAN AN APE.

Dr. Owen, we perceive by the English papers, denies point blank that man is an ape. Some readers may be interested in the following extract from a report of a lecture on the subject, given in the London Times:—

Dr. Owen pointed out some characters of the skeleton of the apes, such, for example, as the great superorbital ridge in the Gorilla ape, which could not have been produced by the habitual action of the muscles, or by any other known influence that, operating on successive generations, produces change in the forms and proportions of bones. The equable length of the human teeth, the concomitant absence of any interval in the dental series, and of any sexual difference in the development of particular teeth, were affirmed to be primitive and unalterable specific peculiarities of man. The difference in the time of disappearance of the suture separating the pre-maxillary from the maxillary bone was not explicable on any of the known causes affecting such character. There was not, according to the lecturer, any other character than that founded upon the developments of bone for the attachment of muscles, which was known to be subject to change through the operation of external causes; nine-tenths, therefore, of the differences—especially those very striking ones manifested by the pelvis and pelvic extremities, which Professor Owen had cited in his memoirs on the orangs and chimpanzees, published in the "Zoological Transactions," as distinguishing the great chimpanzee from the human species—must stand in contravention of the hypothesis of transmutation and progressive development, until

the supporters of that hypothesis are enabled to adduce the facts and cases which demonstrate the conditions of the modifications of such characters. The unity of the human species is demonstrated by the constancy of those osteological and dental characters to which the attention is more particularly directed in the investigation of the corresponding characters in the higher *quadrumana*. Man is the sole species of his genus, the sole representative of his order. He has no nearer physical relations with the brute kind than those which arise out of the characters that link together the great group of placental mammalia, called "unguiculata."

NEW YORK, NOV., 1855.

Events of the Month.

RETURN OF THE KANE EXPEDITION.—At four o'clock on the afternoon of Thursday, the 11th ult., the Relief Expedition under Lieut. Hartstein, sent out in search of Dr. Kane, consisting of the bark Release and the propeller Arctic, hove to off the quarantine, where they were boarded by the health officer, and permitted to pass up to the city. The appearance of these vessels coming up the harbor was the cause of considerable excitement on shore, and on the docks of those ships which they passed in their course—the news having by this time been circulated that Dr. Kane and his party were on board. Many of the steamers plying across the harbor steamed close to them in order to give their passengers an opportunity of welcoming the returning wanderers with cheers; and from the decks and rigging of ships, from the forts, and, in fact, from every available position, three cheers were swelled and prolonged until the vessels neared the Battery, abreast of which they moored for the night.

The Release and Arctic left New York 30th of May last, in search of Dr. Kane's party, who, it was feared, might have had their vessels crushed in the ice, and so have been unable to return. The relief vessels arrived at Lievely, on their trip to the Northward, July 5th. Thence they coasted along the shore of Greenland to latitude 78.33 N., touching at Hare Island, Upernavick, Hakluyt Island, Cape Hatherton, and other places. They were 28 days boring through the pack ice in Melville bay. Thence they crossed Davis' Straits, and went up Lancaster Sound as far as Admiralty Inlet, where they were opposed by a solid pack, which entirely stopped their progress. They then passed down the Western coast, examining Possession and Pond bays. They were fast in the great middle pack for several days, and had a fair prospect of remaining there for the winter; but fortunately the ice, after a while, broke away, and they were enabled to escape. Passing still southward, the expedition reached Lievely on the 13th September, having entirely circumnavigated the Northern waters as far as the ice would permit. At Lievely *they found Dr. Kane and his party*, who had abandoned their vessel in the ice. Receiving these men, the objects of their search, on board, Capt. Hartstein's vessels left Lievely on the 18th of September for New York, and arrived here as above.

The last winter in the Arctic has been unusually severe. Many of the natives perished from exposure and starvation, having been compelled to eat their dogs. The extreme cold prevented the usual hunting expeditions. The relief vessels are in a tolerably good condition, although they have been in collision with icebergs, and severely nipped in the packs. The brig Advance, of 145 tons, set sail in May, 1853, for Smith's Sound, under the command of Dr. Kane, who was detailed to make explorations in the Arctic regions by Mr. Kennedy, then Secretary of the Navy under Mr. Fillmore. On the 23d of July, 1853, she arrived at Upernavick, latitude 73 deg. North, on the coast of Greenland. Nothing further was heard of the expedition from that time until now. The Advance was left in Rensselaer bay, in latitude 79 deg., where the expedition passed two winters. The vessel was abandoned on the 17th of May last, (her flag and pennant flying,) imbedded in ice fourteen feet thick, from which it was found impossible to extricate her; and Dr. Kane and his men accomplished the remarkable journey of 1300 miles, on foot and in boats, following the indentations of the bays from Rensselaer to Upernavick, where they embarked on board a Danish vessel bound to Denmark. This vessel put into Lievely, (Disco Island,) where, by a remarkable coincidence, she was fallen in with by the Hartstein expedition, as above stated. Three of the crew deceased in the Arctic regions, viz.: Christian Ohlsen, carpenter, an excellent man, who died of lockjaw, produced by intense cold; Jefferson Baker, seaman, who died of the same complaint, and Pierre Schubart, cook, (French,) who died from the effects of amputation of his foot, which was rendered necessary from being frostbitten. The scurvy, hitherto the scourge of the Arctic region, was entirely under command, but the lockjaw was difficult of management, and threatened serious disaster. Fifty-seven dogs died of it, breaking up entirely the sledge organization. The number of deaths among the crew is much smaller than would have occurred if the voyage had been to any tropical climate, instead of these cold regions. The most intense cold suffered was in latitude about 82 deg North, where the thermometer fell to sixty below zero, or ninety-two degrees below the freezing point. When the thermometer was at this low range, Dr. Kane and his party were engaged with instruments in making a survey of the indentations of the bay in which their vessel was then imbedded. The discoveries made by Dr. Kane reach to a point Northward much further than ever before explored. Numerous bays and capes have been explored, and some of them named. They will make an addition to the maps of the country which will ever remain a conspicuous monument of American enterprise. On reaching the Northernmost point of land, the expedition passed in sledges over an ice barrier of eighty-one miles in width, when they came to open water, which arrested their movements. Wrangle, a Russian, made a like discovery, travelling North to the Siberian islands in sledges. The existence of this open water, at least in the month of August, is now made certain; but the theory hitherto maintained, that this open water arose from a milder climate, must now, we suppose, be abandoned, in view of the intense cold found in the highest latitude of the expedition.

Dr. Kane returns in fine health. We are much gratified to know that the expedition originally set on foot by our noble fellow citizen, Henry Grinnell, has thus completed its full service, with honor to the country and all engaged in the undertaking. The British Government, acting through the Hudson's Bay Company, is now engaged in ascertaining the full particulars of the loss of Sir John Franklin, of which explicit information may soon be expected.

FRANCE.—On the day of the storming of Sebastopol, at half past eight in the evening, the Emperor was expected at the Italian Theatre, to attend the farewell performance of Madame Ristori. As one of the court carriages, containing the Prefect of Police and three ladies of honor, drove up to the private entrance, a young man named Bellemare discharged two pocket pistols at the vehicle. A policeman beat down his two arms, and the bullets passed under the wheels. Bellemare was at once arrested and examined. He is exceedingly near-sighted, which accounts for his blundering shot. He was a monomaniac at most, and declared that he long nourished designs upon the Emperor's life. His fame lived but a day, and he has already been forgotten in the overwhelming news from the East.

CENTRAL AMERICA—A mass meeting of the citizens of San Juan del Norte, or Greytown, was held on the 6th of September, at which it was resolved, in substance as follows: That a Provisional Government was necessary; that a Civil and Military Governor be therefore chosen by the people; that a Council, consisting of five persons, be also chosen by the people, whose duty it shall be to advise and consult with the Governor on all public matters; that the Council be empowered to draft a Constitution, and that the Provisional Government continue in force until a permanent one shall be formed under the new Constitution. All foreign vessels, except Mail Steamers, entering the harbor, shall pay the same port charges as formerly levied in this port from and after the first day of October next.

After the passing of the resolutions, Col. Henry L. Kinney was appointed by acclamation Civil and Military Governor of the City and Territory of San Juan del Norte, or Greytown. The following persons were elected the members of the Council, viz.: Collins Campbell, Dr. Thomas Cody, Pillar Esquival, Samuel Shepherd, Sen., A. M. C. Wood.

On the 7th of September, Col. Kinney was sworn into office, and on the 12th he issued his proclamation.

On the 3d of September, Walker, with one hundred and fifty men, (only eighty of whom were white,) came down from San Juan del Sud over to Virgin Bay, and took up his quarters. General Mandiola immediately came down from Rivas and attacked him with four hundred men. The result was that the Government party were defeated with a loss of some fifty men, while Walker sustained only a loss of one white man and four natives. A messenger who left shortly after the battle of Virgin Bay, reports that Walker had returned to San Juan, and would probably attack Rivas in a few days.

THE ISTHMUS OF PANAMA.—From Panama we have advices of a controversy between Mr. Ward, the United States consul at that city, and the State authorities, which ended in the lowering of the American flag at the consulate. The misunderstanding arose from circumstances connected with the imprisonment of Wm. H. Hunter, a citizen of the United States, who had been arrested under charge of a breach of trust. The consul applied in the first instance for information on the subject to the chief superior of the State, but receiving no satisfaction, subsequently addressed himself to the Governor of the Province, who, after a delay of several days, returned the letter unanswered. A second letter to the same authority, demanding explanation of the neglect, met with a similar fate. Upon this the consul fell back on his official dignity, and declined any further communication with the functionaries of New Granada. He issued a protest, which was read to a number of Americans who were present to witness the proceedings, and at the same time forwarded a copy to the chief superior, and hauled down the flag from the consulate. The governor defends his course on the ground that he was not competent to receive official communications from the United States consul, that function being reserved to the chief superior of the State. It is understood that Mr. Ward has sent information of the affair to the commander of the sloop-of-war Massachusetts, now upon the coast, and her arrival was awaited with interest by the American population at Panama.

MEXICO.—General Alvarez has been elected President, but it was thought that the military would not permit him to enter the capital to assume the duties of the office. Gen. La Vega had retired, and Gen. Carrera had again assumed his duties as President. There were vague rumors afloat that Gen. Gadsden, our minister, had furnished Alvarez with men and money, but the reports had been contradicted by both those functionaries.

CALIFORNIA.—We have California dates to Sept. 20. The election for State and County officers on the 5th of September resulted in the success of the Know-Nothing State ticket by a small majority. The whole State ticket was elected, with a majority of one or three in the Senate, and about twenty in the Assembly. J. Nelly Johnson, K. N., defeated Bigler, the Democratic candidate for Governor, by a majority of from four to five thousand. The city and county of San Francisco have gone Democratic. There the Whigs stepped in as a third party, and they polled just votes enough to defeat the entire Know-Nothing ticket.

The most frightful calamity occurred on board the Nicaragua steamer Uncle Sam during her last passage from San Juan to San Francisco, which port she reached on the 14th September. The cholera broke out with fearful violence, and before the vessel arrived at San Francisco *one hundred and twenty* persons had died of this cruel disease. The passengers, for whose alarm, perhaps, some allowance must be made, assert that instead of one hundred and twenty there were two hundred to two hundred and fifty deaths!

Mr. Emeric, a cabin passenger on board, says all were well until the second day out from San Juan; that night he was called up by a friend. On rising and going into the saloon he found three of his friends, with whom he had been spending the evening previously, all retiring in health about the same time, lying dead, the bodies already sewed up in canvas, ready to be consigned to the deep. Imagine his feelings at the shock. He at once returned to his state room and made his will, supposing that his turn would come next. Mr. Emeric says that he kept an accurate account of the dead until the number had reached 170, when they became so numerous that he was forced to stop. He gives it as his opinion that considerably over two hundred died. A steerage passenger says over 250 died. Twenty-one died in a single watch.

One person states that the mules used for conveying passengers and express matter had nearly all been taken and

driven off by Walker's army, consequently the Transit Company had scarcely animals sufficient for the ladies and children, and that the steerage passengers were refunded the price of a mule ($8 cash), and were then obliged to walk across; and in doing so became heated, and drank very freely of whiskey and other hot drinks, and very many of them became intoxicated. On arriving at San Juan they indulged very freely in tropical fruits, and on going on board of the ship, and beginning to feed on salt pork, the cholera almost immediately broke out with great violence, and in the excitement induced scores to rush to the bar for liquors.

On the 10th Sept. the anniversary of the Pioneer Society and the admission of California into the Union was celebrated in San Francisco with imposing ceremonies. An oration was delivered by George Penn Johnson, Esq., and a poem by Edmond Pillet was recited.

The leading Chinese of the city had published an address, protesting against the ill treatment which they allege their race had met with in California.

A fire occurred at the flourishing village of Weaverhill on the 7th of September. The loss in buildings exceeds $100,000; the loss in property will amount to $100,000 and upward.

A fire broke out, Sept. 1st, in the French hotel in Grass Valley, which spread so rapidly that in less than two hours nearly the entire town was destroyed, embracing all but one of the principal business houses. The space of ground covered with ashes is estimated at from twenty-five to thirty acres, and the number of houses destroyed at three hundred and fifty. The total loss is put down at $400,000. All the hotels, bakeries, and every boarding house in town are destroyed. The materials of the printing offices were saved; also all the churches.

GREAT BATTLE BETWEEN U. S. TROOPS AND THE INDIANS.—A great battle took place on the 3d of Sept. at Sand Hills, near the north fork of the Platte River, between the Sioux Indians and the entire force of United States Troops under Gen. Harney, numbering about 450 men. Major Cady commanded the infantry and Col. Cook the dragoons, mounted infantry and artillery. The battle commenced early in the morning and lasted several hours. The Indians fought desperately, but were routed. A running fight for some ten miles followed, during which the Indians made a stand and fought with much gallantry. They were, however, defeated with the loss of eighty men killed and fifty women and children taken prisoners. The Indian women fought furiously. Gen. Harney lost six killed and as many wounded. No officers were killed. The Indians engaged in this battle were the Brules and Sioux—the same that massacred Lieut. Grattan's command and murdered a mail party—the way-bill of the mail having been found with them.

LABRADOR.—A correspondent of the *Canadien* recently returned from the shores of Labrador, states that the inhabitants, mostly French Catholics, are in great destitution. One of their chief resources has always been the birds and eggs which abound in the islands, but of this they are now deprived by a new class of fillibusters hailing from American ports, and from Prince Edward's Island. They carry away now all the eggs, and even make their piracy a monopoly, threatening and ill-using the inhabitants in search of the same supply. It is complained that Captain Fortain has in no way protected the people in the possession of what they have been accustomed to consider their property. Not only is one of their chief staples of life snatched from them, but it is destroyed for the future, birds getting scarce for want of reproduction. It is urged upon the Government to insure to Labrador protection from pirates for another season.—*Montreal Witness.*

DEATH OF AN INDIAN CHIEF.—One of the most remarkable Indians at the Northwest died on the 7th of September at the great age of about 100 years. Ke-Che-Walshe-Ke, or the Buffalo Chief, the head and the most able chief of the Chippewa nation of Indians—alike noted for his rare integrity, wisdom in council, power as an orator, and magnanimity as a warrior. He was confined to his lodge only a week by sickness, pulmonary disease, and was buried one mile below Middle Fort with military honors. Religious services were held in the Catholic church, Buffalo having received the baptismal rites two days before his death. Two or three days previous to his decease, Buffalo made his will in the presence of Commissioner Manypenny and others, and a short time before his death he presented the Commissioner his pipe and tobacco pouch, desiring him to take them with him to Washington, saying, "I have smoked my last pipe, and have no more use for them." The Commissioner told the dying chief his wish should be gratified. Buffalo had his fifth wife, and a numerous family, mostly dressing after the fashion of the whites, and considerably advanced in civilization.

PASSMORE WILLIAMSON'S CASE.—Judge Kane has delivered an opinion adverse to the reception of the petition of Jane Johnson to quash the writ of *habeas corpus* in the case of Passmore Williamson, pronouncing her to have no *status* in Court, being entirely without its jurisdiction. The opinion is very long, reviewing the whole case and reaffirming his former opinion. He asserted that the law of nations guaranteed the right of transit of slaves, and of every other species of property through territory where slavery was not recognized. If the contrary principle was sanctioned, the time might come, he said, when the cotton of Louisiana, the rice of Carolina, and the rum of New-England, would be restricted from transportation without the bounds of the State producing them. He affirmed that the federal constitution recognized slaves as property, and up to 1830 slavery existed in the thirteen original States. He said that Williamson's duty then as now was to produce Jane Johnson's children. Were the petitioner here to abide the action of the Court, she would have a right to be heard, but being without the jurisdiction, the records of the Court cannot be opened for a stranger.

CHOCOLATE TRADE IN BOSTON.—Few are aware of the extent of the chocolate business, or the supremacy which Boston has obtained in its manufacture. Of the hundreds of thousands of dollars worth of chocolate (in its different forms) sold in America during the year, nearly all is manufactured in that city. A Boston paper says:—"A short time since we had the pleasure of witnessing the process by which the rough bean is prepared for use. In the storehouse on the one side were heaped huge sacks of the cocoa bean, as it arrives from South America and the West Indies, and on the other, tall sacks of the prepared article. In the roasting room the beans are roasted (not baked), and then ground. After going through the many processes of mixing and moulding, cooling and sorting, papering and boxing, the mass is ready for sale and for use, and it goes thoughout the country."

MURDER OF A JUDGE.—Judge Thomas Clingman, of Carroll county, Missouri, was murdered on the 9th inst., by one of his field slaves. The neighbors immediately assembled, seized the murderer, and executed him by Lynch law.

THE YELLOW FEVER IN VIRGINIA.—The accounts from Norfolk and Portsmouth are still encouraging, leading to the belief that the disease has ceased to exist. In Norfolk, the Howard Association have advertised the fact, that all nurses under pay are discharged after October 1st, and notified them to call for their wages. All sorts of business is reviving. The Farmers' Bank is again open for the transaction of business. Letters from Norfolk state, that the weather had been quite warm for the preceding two days, which had caused nine new cases of fever for the three days ending on Friday night.

THE NORFOLK SUFFERERS.—At a meeting of the General Committee, held in New York on Saturday, Oct. 13, 1855, W. H. Macy, Esq., Treasurer, reported the amount of money received to 1 o'clock P. M. of that day at forty-one thousand eight hundred and twenty-seven dollars forty-five cents, including $400.61 from the citizens of the city of Elizabeth, N. J., by Wm. J. Magie, in addition to 108 tons 13 cwt. 20 lbs. of ice, generously contributed by the Knickerbocker Ice Company, and three large cases of children's clothing, from the Brooklyn Female Employment Society—value $300; also a bill of lading of some packages of wine, from a donor whose name has not been reported.

IRON ORE.—Professor Emmons, the State geologist of New York, has traced in the valley of the Adirondac, for a distance of two miles, a bed of rich iron ore. He says there might be procured, within two feet of the surface, seven millions tons of ore, which would make three millions tons of superior iron.

TRANSATLANTIC TELEGRAPH.—We understand that the attempt to lay the submarine telegraph from Cape Breton to Newfoundland is by no means abandoned. The gentlemen engaged in the enterprise are sanguine of success, and only await the return of another warm season to repeat their endeavors, as the months of June and July are the only ones when the wire can be lain with safety.

GREAT RAIL ROAD ROBBERY.—A discovery has been made of an extensive scheme of robbery of packages carried as freight over the N. Y. Central Railroad, at Rochester. For a long time packages have been missing occasionally, for which the company have had to day. Search being made, a large quantity of merchandise was found in the premises of two conductors and several brakemen, who were arrested. The amount of goods found upon them is very large and valuable, showing that this system of robbery has been carried on for a long time. Thus far twelve persons have been arrested, either as principals or accomplices, and more are suspected.

SALE OF THE NORTH AMERICAN PHALANSTERIE.—On Wednesday morning, Oct. 3, the domain of the North American Phalanx, comprising six hundred and eighty acres, was sold at public auction. The history of this band of Associationists is too well known to require any further explanation; but to those who are not familiar with the locality of the estate it may be as well to mention that it is situated upon the celebrated "Green Sand Marl" region in Monmouth County, New Jersey, distant about twenty-eight miles from New York, and five miles west of Redbank, on Nevesink River. The domain contains a diversity of soil in good culture, of easy tillage, and having extensive improvements and great naturaladvantages and resources, such as arable uplands, (upon which there have been distributed within the last twelve years about 40,000 tuns of marl,) about 315 acres exceedingly well adapted to farming, market gardening and fruit culture; natural meadow, from which two crops a year are cut, about 70 acres; woodlands, well timbered with oak, hickory, chestnut, locust, (native and cultivated groves,) about 220 acres; orchards, comprising the usual variety and succession of peaches, some seventy varieties of the choicest apples (trees of remarkable thrift and vigor, four to twelve years' growth, the older ones bearing quite freely); pears, standard and on quince stocks; plumbs, nectarines, quinces, grapes, &c., all bountifully watered by springs and brooks, together with extensive marl beds (hop brook and dry bank); buildings, comprising a large central edifice with large dining-room, kitchen, laundry with steam-engine, dairy, ice-house, and all the appointments of a complete establishment, lodgings and separate tenements,out-houses, a large brick building (40x75 feet, two and a half stories, with cement cellar floor, for agricultural purposes, and fitted up with apparatus for preserving and drying fruits and vegetables. All these have water distributed though them, supplied from never-failing springs by force-pump and water-wheel. The sale was advertised to commence at 10 o'clock, but did not take place much before noon. There were about two hundred persons present, comprising representatives from Monmouth, and all the surrounding counties. The bidding was very dull at the commencement, but toward the close became quite spirited. The amount realized by the sale was $56,050, averaging at a rough estimate $82 per acre. The sale closed about 8 o'clock, and the result gave general satisfaction to the members of the Association, by whom, and the stockholders, nearly the entire domain was purchased. Thus the social position of the Phalanx will remain unchanged, while the general management of the estate, thus divided into parcels, promises to be far more successful than it was while under the control of the Community. In fact, it is the conviction of many associatiations that, much as it may seem like a step backward, it is in reality a preparatory movement, destined to subserve the cause of Progress and to aid in its consummation.

DESTRUCTIVE FIRE.—About two o'clock on the morning of the 11th inst., a fire broke out in the third story of Hecker and Brother's extensive steam flouring mill, at the foot of Bridge Street, Brooklyn. The building was five stories in height, and occupied a large space of ground. The contents comprised 16,000 bushels of wheat, which had recently been stored, 750 barrels of flour, and 5,000 bushels of mill feed. The flames spread rapidly, and it was not long

before the whole building was reduced to ruins; but the boiler and machinery in the engine room, which was divided from the main building by a thick wall, remained comparatively uninjured. With the exception of about a hundred barrels of flour saved by the Second District Police, the contents were destroyed. The papers of the firm were saved in one of Herring's safes. The building was owned by Mr. A. Sands, and was fully insured. Value about $12,000. The losses of the Messrs. Hecker amount to about $60,000.

IMPORTED CRIMINALS.—In August last Mayor Wood became advised of the sailing of the Hamburg ship Deutshland from Hamburg for New York, having on board several criminals direct from the prison at Gustrow. He notified the agents of the ship at this port, that upon her arrival he would take charge of these criminals, and that they should not be permitted to go at large, to add to the crimes already so extensive among us. The convicts were removed to a place of security, until arrangements should be made for their return to Hamburg; the course which the Mayor has determined to adopt with reference to all such emigrants. They were accordingly sent back in the Deutschland, which sailed on the 13th inst., on her return to Hamburg, with the four men on board,—not at all pleased with the prospect of again being made inmates of a prison.

SANITARY POLICE.—At the request of the Mayor, Dr. Griscom, the eminent physiologist, has published a plan of a Sanitary Police, for the prevention of disease in this city. He proposes to organize a corps of practiced and competent medical men, one for each ward, and to invest them with police powers. His arguments in favor of such a provision are very striking.

DEATH OF DR. SHEW.—Dr. Joel Shew, an honest man and earnest reformer, widely known as a pioneer in the introduction of the Water-Cure practice into this country, died October 6th,, in his 49th year. He was born in Saratoga County, and died at his Water-Cure establishment at Oyster Bay, L. I. Before his study of medicine he was engaged in daguerreotyping, with his brothers, and injured his health from an injudicious use of the chemicals, and was much improved by the treatment by water, to which he was most earnestly devoted for the remainder of his life. But during the whole time he has had symptoms of functional derangement of the liver, and has anticipated an early and perhaps sudden death from this cause. A post-mortem examination proves that his diagnosis was correct, and his fears too well founded. His liver was seriously enlarged, and the usual effects followed, and sudden dropsy closed his earthly career. He retained his faculties to the last, and died with the fullest confidence in the system he had so ably and earnestly advocated.

FOREIGN.

FALL OF SEBASTOPOL.—On Saturday, the 8th of September, within a few days of the anniversary of the landing of the allied forces in the Crimea, and 816 days after the opening of the besieging batteries against Sebastopol, on the 17th of October, 1854, a final and victorious assault was made upon the southern part of the town. Before night the French flag waved in triumph on the Malakoff Tower, which had fallen before the indomitable courage and perseverance of the assailants, and within a few hours more the Russian garrison had evacuated the Karabelnaia suburb and the southern portion of the fortress, after blowing up the magazines and principal works, setting fire to the town in many places, and then endeavoring to withdraw by the bridge across the harbor from this terrific scene of devastation and defeat. So fell Sebastopol. The catastrophe surpassed in horrible interest all the preceding scenes of this gigantic contest. The columns of the allied armies, combined in a fourfold attack, struggled all day with equal valor, though with unequal success, against the principal points marked out for assault. The extreme right of the French attack was directed against the work called the Little Redan, which was at first carried by their impetuosity, though they were subsequently driven back by the fierce resistance of the Russians. The second and principal assault of the French army was against the Malakoff, which was carried by storm, and determined by its fall the fate, not only of the day, but of the siege. A third attack was made by the British forces on the Great Redan, and although we learn that the salient angle of this formidable work was at one moment carried and occupied by their troops, it must be added that they were subsequently driven out of it by the fire of the Russian batteries which commanded it, and this check in some degree diminishes the exultation which will be felt in that country at the triumphant termination of the siege. The French columns on the left also assailed, in the fourth place, the Central Battery, but failed to establish themselves in the work. We have no doubt that every man who attacked the defences of Sebastopol on that eventful day, fought with the same undaunted gallantry and the same determination to carry the place or perish in the attempt; and although the results of these several attacks were unequal, all were animated by the same spirit and contributed to the great result. The first prize of this glorious victory belongs of right to the gallant French, since the Malakoff Tower, the key of the main position, fell before the vigor of their assault; but with that chivalrous feeling which is the noblest bond of men who have fought and conquered together, the names of all those who carried the rugged defences of Sebastopol deserve to stand side by side on one page, and no invidious distinction should sully or lessen their common renown.

The Russians on their side unquestionably defended the place with the utmost determination, and on more than one point they had the advantage over the besiegers. But it was the courage of desperation, for this effort was their last. No sooner were the outer works taken, which laid the town and the port at the mercy of the allied forces, than the men-of-war and steamers in the harbor were all set on fire, blown up, sunk, or destroyed, either by the fire of the allied batteries or by the orders of the Russian authorities. Such was the fate of the Russian Black Sea fleet, on which the Imperial Government had expended incalculable sums of money and incessant labor—that fleet which two years ago threatened the very existence of the Turkish empire.

To Correspondents.

J. B. W.—In measuring the circumference of the head, allowance for the hair is always to be made.

For description of the function of the organ of Human Nature, see "Fowler's Phrenology" and "The Self-Instructor." It may be said, in short, to give impressions as to the character of men at first sight.

Suavitiveness is defined in the same works. When fully developed it serves to give one power to adapt themselves to almost any society, and to render themselves always agreeable.

It is thought by many, that frequent cutting of the hair and beard is enervating in its effects upon both mind and body. It is certainly true in theory, but whether the effect is so great as to be perceptible practically, is by many doubted.

It will cost, to bind your Journals, from fifty cents to a dollar, depending on the style.

THE GRAVEL-WALL.—Mr. William Blanchard, of Washington, D. C., writes the publishers as follows:—

"I have built, with my own hands, the wall of a small house, nineteen by fourteen feet, on your plan, using the marble clippings from the Patent Office. I think half-inch boards will do much better than thicker ones [for boxes?], and if well battened, I believe I can build a wall smooth and true enough for the finishing coat of plaster, that is, to do with only one coat.

G. C. R., RICEVILLE, TENN.—The works of Theodore Parker are as follows: Ten Sermons on Religion, $1 25; Sermons on Theism, $1 50; Speeches, Addresses, and Occasional Sermons, 2 vols., $3 00; Additional Speeches, 2 vols., $3 00. We will forward them to your address, postage prepaid, on receipt of their respective prices.

Is water-lime better than quick-lime for gravel-wall houses? One costs about as much as the other here. Quick-lime is best.

An addition of water-lime may be of service, but common lime is good enough.

J. K. B.—The man you name is not, and never has been an agent of ours.

J. B. C., NORTH FAIRFIELD, OHIO.—Please state *what* Dr. Derby lectured in your place during the "last week" and oblige.

STUDENT.—We have not the accurate measurement of the organs of the persons you name.

W. B.—Criminal Legislation, in book form, will not be ready before January next.

M. A. M., ROCK ISLAND, WIS.—The box of books will reach you quicker by express, but will cost less if sent as freight. Please give us full shipping directions.

PERSONAL.—WILLIAM D. POTTS, late of Rockford and Galena, Illinois, is requested to report himself to this office—at his earliest convenience.

NOTICE.—Applications for Patents for Bathing Apparatus and Surgical Instruments, will be made at FOWLER AND WELLS, Patent Office Department, for less than the usual charges for such business.

D. W. Z.—New Providence, Pa. THE STUDENT may be had at this Office. Terms, $1.00 a year.

Literary Notices.

ALL Works noticed in this department of the JOURNAL, together with any others published in America, may be procured at our Office, at the Publishers' prices. EUROPEAN WORKS will be imported to order by every steamer. Books sent by mail on receipt of the price. All letters and orders should be post-paid, and directed to FOWLER AND WELLS, 308 Broadway, New York.

JAIL JOURNAL; OR, FIVE YEARS IN BRITISH PRISONS. Commenced on board the Shearwater steamer in Dublin Bay, continued at Spike Island—on board the Scourge war-steamer—on board the "Dromedary" hulk, Bermuda—on board the Neptune convict-ship—at Pernambuco—at the Cape of Good Hope (during the anti-convict rebellion)—at Van Diemen's Land—at Sydney—at Tahiti—at San Francisco—at Greytown—and concluded at Pier No. 3, North River, New York. With an introductory narrative of transactions in Ireland.

An important and valuable work, and should be in the hands of every person unacquainted with the "workings" and "doings" of MONARCHICAL OPPRESSION. One handsome 12mo volume. Prepaid by mail, $1 25. For sale by FOWLER AND WELLS, 308 Broadway, New York.

AN ILLUSTRATED HISTORY OF THE FLUTE, being a sketch of the successive improvements made in the flute, and a statement of the principles upon which they are constructed, with a description of the new or Boehm Flute, by A. G. Badger, 181 Broadway, N. Y. Price 12½ cents.

The title of this little work gives a correct idea of its contents, and we have only to add the description is very well written. Mr. Badger has had much experience as a flute manufacturer, and has learned all there is to be known relative to the instrument.

THE DESERTED WIFE.—By Mrs. Emma D. E. N. Southworth. Philadelphia: T. B. Peterson. Price 1.25.

This is one of the best of Mrs. Southworth's works, and is written with the professed purpose to teach the lesson "that the fundamental causes of unhappiness in a married life, are a defective moral and *physical* education, and a premature contraction of the matrimonial engagement." The scene is laid in one of the Southern States, and the story gives a picture of the manners and customs of the planting gentry, in an age not far removed backward from the present. The characters are drawn with a strong hand, and the book abounds with scenes of intense interest, the whole plot being wrought out with much power and effect.

MANUAL OF DEVOTION.—A. S. Barnes & Co. publish a "Manual of Devotion for the morning and evening of each day in the month." Its author is N. C. Brooks, A. M., President of the Baltimore Female College. It is designed for the use of schools and private families. "The

School Harmonist" is an accompaniment to the "Manual of Devotion," and contains all the hymns of the latter set to music.

NEW CHURCH MISCELLANIES; OR, ESSAYS ECCLESIASTICAL, DOCTRINAL AND ETHICAL. By George Bush. New York: For sale by Fowler and Wells. [Price, prepaid by mail, $1 25.]

These Essays and miscellaneous pieces are reprinted from the *New Church Repository*, the readers of which will be glad to see them in this convenient form; and all persons interested in the New Church Doctrines, or who may desire to investigate them, will find in Prof. Bush a learned and able expositor and teacher. The following is the table of contents:

The Priesthood and the Kingship; Preaching the Ministry; The N J. Magazine and the N. C. Ministry; N. C. Organization and Government; A Trained and Professional Clergy; The Party of Order and the Party of Liberty; Aphorisms on Slavery and Abolition; Pseudo-Spiritualism; Sleep; The N. C. System Referable solely to a Divine Origin; Swedenborg and St. Paul.

STORIES BY DICKENS.—T. B. Peterson, Philadelphia, has issued (uniform with his complete edition of Dickens' works,) "The Seven Poor Travellers," and "The Schoolboy and Other Stories by the Christmas Fire." Price 12½ cents each.

CITY STATISTICS.—"The Annual Report of the City Inspector, for the year ending December 31st, 1854," is one of the most interesting documents of the kind with which we have lately met. We have laid it carefully aside for future reference.

Miscellany.

THE NEW YEAR, 1856—GETTING READY.—We have received numerous "promissory letters" from friends far and near, promising to form Clubs for the next year's JOURNAL in their respective neighborhoods. This is encouraging for us, and we shall spare neither pains nor expense in serving up such a MONTHLY VISITOR as shall delight the taste, and improve the minds and bodies of our readers. So, good friends, your efforts will be *appreciated* and *reciprocated*. We shall be ready to re-enter on our new subscription books the names of all new and old subscribers. One number more closes this year's volume—then a new one begins. Think of it! we are at the brink of an old year; but a new one will soon dawn upon us. Let us be always ready to welcome the new seasons!

SCOTTISH SURNAMES.—The following amusing list of minister's names, who are, or have been in the Kirk of Scotland, has been prepared with some care and lithographed in Edinburgh:

Thirteen Scotts, one French, one Welch, one Ireland, one Home, fifteen Browns, five Whites, two Greys, three Reids, two Blacks and one Green, three Roses, a Primrose a Cowan, a Hood, a Wood, a Forest, a Hill, a Craig and a Cairn, twelve Peebles, seven Burns and a Burnside, a Peat, a Bog and five Muirs, a Foot, a Proudfoot and a Broadfoot, a Shank, two Crookshanks and a Pair of Pattons, a Laird and Freeland, ten Grants and a Charter, a McNae and a McQuhae, two Guns and a Cannon, a Lamb and a Kid, a Lyon, a Hog and a Bullock, and a Baillie, nineteen Smiths, six Taylors, four Millers, three Baxters, three Cooks, three Gardeners, a Shepherd, a Herdsman, a Clerk and two Foreman, four Walkers, two Stalkers, a Hopper and a Trotter, and a Flail, four Hunters, a Falconer, a Forester, a Fisher and a Spalden, two Martans, five Sterlings, a Swan and a Crow, two Smalls, two Littles, one Melkiejohn and one Littlejohn, two Young and one Auld, two Singers, two Songsters, one Harper and a Piper, a Lee and a Story, a Bell and a Spark, a pair of Tause, a Flyter and two Cupples, joyned with Hope, Patience and Love.

An interesting thing it would be, to have the true *origin* of all these singular names. Who can tell the origin of his own name?

FOWLER, WELLS AND CO., PHRENOLOGISTS AND PUBLISHERS.—The *International Journal*, of Boston, has the following editorial notice of our enterprises:—

"These gentlemen are doing an extensive business as Booksellers and Practical Phrenologists. Their books are of the kind which *do good*—their object being the restoration, preservation, and increase of health, and the proper development and cultivation of the mind. Their success as Practical Phrenologists is indeed great, keeping Phonographic Reporters constantly busy in reporting and writing out descriptions of characters. Hundreds of young men get suggestions in these examinations which reform them of bad habits, restore health, save them from crimes, and direct them in pursuits for which they are best adapted.

"This Firm is having an extensive influence on the public mind, coming in contact with about half a million readers monthly through their Journals—while their books are scattered broadcast throughout the land, and their examinations numbering thousands upon thousands yearly. Mr. D. P. Butler, the partner of the Firm, who has the management of the Boston Branch Office, was selected some twelve years ago by the Fowlers as having *the organization* for the phrenological enterprise, and his remarkable success as a Phrenologist is certainly something in favor of their claims in reading character and adaptation to business. Mr. Butler has had every advantage possible to prepare him for his responsible duties, and he seems to have improved them—commencing as a clerk and student, and now, at the age of thirty, a partner of this extensive and influential House. Those intimately acquainted with this Firm state, that Mr. Butler is considered by them to be one of the best Practical Phrenologists in America.

"The business of this Firm is done upon the *cash* principle, and they are thus enabled to furnish their publications at the lowest possible prices. Upon the whole, we believe these gentlemen to be engaged in a good cause, and that the tremendous influence which they exert, to be of the *right kind;* so believing, we heartily recommend them and their cause to our readers and the public generally."

[We thank the *International* for this voluntary commendation, and shall *try* to merit the editor's approval.]

NOT RECEIVED.—Quite a number of "complaints" have been made to the publishers by former subscribers, that they have "missed" the Journal since the June number. They ask an explanation. We give it as follows: In every instance, so far, we find on referring to our books and their former order, that their subscriptions had terminated in June, with the last volume, and as they did not *renew*, of course their names were not entered in our new books, consequently the JOURNAL has not since been mailed to them. It should be remembered that the JOURNAL is sent no longer than paid for.

If it is inconvenient to remit funds once a year, and if the reader wishes the Journal continued to his address permanently, he may remit enough at club rates to pay for it three, five, or ten years, if he prefers. The whole amount will be duly credited, and the name transferred to new books each year, until Journals to the full amount shall have been delivered to him. THUS, five copies will be sent one year for $4, or one copy five years; ten copies one year for $7, or one copy ten years; twenty copies one year for $10, or one copy twenty years for the same amount. We have the names of many subscribers upon our books which have been there from the very commencement of the Journal. They request us to consider them "LIFE SUBSCRIBERS." Instead of renewing for a *single* year, they renew for several years at one time. We are very careful to "keep our mail books straight," and to mail the Journal *regularly*. When a number gets lost or miscarried, we are always most happy to remail the missing number, providing we have any on hand; but we cannot undertake to furnish complete sets, when a subscriber fails or omits to renew for months after his subscription runs out. Hoping our friends will be as prompt themselves as they expect and require us to be, we shall never lose sight of our duty to them, nor discontinue to send the Journal while it is due.

PHRENOLOGY IN WISCONSIN.—Prof. Northrop, is to lecture on the Science of Phrenology at the Baptist Church on Monday and Tuesday evenings next. This is a subject of vital importance, and we doubt not every one will be well paid for the time spent in attending his lectures. He is a scientific man, and thoroughly understands the subject of which he treats, and is furnished with a large collection of busts and diagrams to illustrate his lectures. Prof. N. and Lady may be found at the Church during the day prepared to give charts and delineations of character, of such as may call upon them.—*Geneva Wis. Express.*

[We are glad to note the liberality of the Geneva Baptist Church, in thus opening its doors and pulpit to scientific lectures. We hope the example will be generally followed.]

SEWING MACHINES FOR SEWING BOOTS AND SHOES.—This machine now on exhibition at the Crystal Palace surpasses any before exhibited, and is the only machine in operation, to our knowledge, that sews with a wax thread. A spool of thread of from fifty to one hundred yards is waxed for this machine in a minute's time; and the machine drives it through four or five thicknesses of hard leather, at once drawing the thread firmly and strong. Nearly all the sewing for boots and shoes in some of our Eastern factories is done by machinery. They do not sew on the bottoms yet, but a cement has been prepared that is said to answer a better purpose by sticking them on. We are not, however, prepared to vouch for the durability of the sticking process.

NEW MODE OF HANGING WINDOW-SASH.—Geo. M. Ramsey of this city has made certain improvements in hinges for window-sash. Each sash is made in two parts, either of which will open like a door; in short, it amounts to a double door. But there is another advantage in this sash, it may be raised and lowered at pleasure, whether open or shut. The hinge is attached to a rolling slide on the back of the side bar of the sash—so that it moves up and down very easy.

A NEW CORN PLANTER has been invented by A. J. Cox, of Quincy Farm; a description will be given in a future number of the Journal. A patent is applied for through Fowler and Wells, *Patent Agency Department*. See advertisement in another column.

Among the many valuable improvements we notice at the fair, we find some inventions which we deem utterly valueless. For instance, a bedstead is so conscructed as to throw the lazy sleeper upon the floor, provided he does not leave his couch at the appointed hour, after due notice by an alarm clock. The man who has not sufficient energy to arise until thrown out of bed after the proper time comes for him to get up, might better be in bed than out of it. Such a man is not of sufficient account to call the aid of inventors to his rescue, and for this reason we consider the invention valueless, although it may be ingenious.

CHANGEABLE CHAIR FOR CHILDREN.—A chair for children is constructed to answer the purpose of a nice rocking chair, a high table chair, a crib for very young children, and a cradle. A most useful invention in a country so prolific as this.

MATCH-MAKING MACHINE.—A most simple, complete, and efficient match-making machine is exhibited by Southurch, Thomas & Co. The matches are friction matches, not matrimonial, matrimonial match-making is a more complex operation. A man and a boy will make matches by the aid of this machine, and turn several boxes per minute. We may illustrate this machine and describe its operation. Friction matches have become one of the necessaries of life.

ATMOSPHERIC FEEDER FOR NEWSPAPERS.—Some of the newspapers of our city have an atmospheric feeder to carry the papers to the press to be printed, and also to take them away after they are printed. The idea of taking up papers by suction is one of modern date. Each paper is taken up separately in this way as effectually as it could be by human hand. The most important idea now is to get the name of the subscriber upon them and the work is complete—and a most rapid completion it is in most of our printing establishments.

WATER-PROOF PAINT.—In our advertising columns, our readers will find an announcement of a much needed article in the way of an Incombustible and Indestructible Water-Proof Paint. Those who have tried it recommend it highly, and we advise all who are in need of paints of this description, to give it an examination.

Our Three Journals.

LOWEST RATES FOR 1856.

"In the ranks with the best,
On a par with the cheapest."

CLUB PRICES.—The following rates have been adopted for the New Volumes of OUR THREE JOURNALS. Subscriptions for LIFE ILLUSTRATED may commence now.

PRICE FOR LIFE ILLUSTRATED, A YEAR.

Single Copy, . . .	$2 00	Nine Copies, . .	$12 00
Three Copies, . . .	5 00	Twelve " . .	15 00
Five " . . .	8 00	Fifteen " . .	17 00
Seven " . . .	10 00	Twenty " . .	20 00

FOR LIFE ILLUSTRATED, HALF A YEAR.

Single Copy, . . .	$1 00	Nine Copies, . .	$6 00
Three Copies, . . .	2 50	Twelve " . .	7 50
Five " . . .	4 00	Fifteen " . .	8 50
Seven " . . .	5 00	Twenty " . .	10 00

ANOTHER PROPOSITION.—In order that *our* friends may show *their* friends just what sort of a paper LIFE ILLUSTRATED is, we will send it to new subscribers *three months*, in clubs of twenty copies, for twenty-five cents each!

At these rates we are confident of the co-operation of all who are acquainted with the excellence of our paper. We rely on the friends of progress to increase its circulation in their respective neighborhoods, according to their own estimate of its merits. *We* will furnish a good paper, *they* will obtain subscribers. Reader, every one will put in a quarter on your recommendation. Will you try it? Begin now. We wish everybody to have the reading of LIFE ILLUSTRATED three months, six months, or a year.

TERMS OF THE

PHRENOLOGICAL AND WATER-CURE JOURNALS.

TERMS BY THE YEAR.

Single Copy, . . .	$1 00	Ten Copies, . . .	$7 00
Five Copies, . . .	4 00	Twenty Copies, . .	10 00

TERMS FOR HALF A YEAR.

Single Copy, . . .	$0 50	Ten Copies, . . .	$3 50
Five Copies, . . .	2 00	Twenty Copies, . .	5 00

Agents and co-workers in every neighborhood may now form Clubs, and send in as soon as ready. We hope for large accessions to our lists, and promise, in return, to furnish each subscriber a full equivalent for his expenditure.

Please address,

FOWLER AND WELLS, 308 Broadway, N. Y.

AMBROTYPES.—This is the latest improvement in the daguerreian art. The picture is taken on fine plate glass and permanently secured between two plates of glass; is bold, clear, and distinct, not reversed, and will not change in any climate. There is an essential difference between the ambrotype pictures taken on a *single* glass and covered with black varnish, and those hermetically sealed. Cutting, of Boston, has patented the latter process, and Messrs. Judson & Co. have the exclusive right to take the patent pictures in Newark, N. J. Having seen some fine specimens of their work, we have no hesitation in recommending our Newark friends to inspect the pictures taken in this manner.

WANTED, a few skulls of the ESQUIMAUX INDIANS for our PHRENOLOGICAL CABINETS. We have specimens of skulls from almost every nation, race, and tribe, but lack that of the ESQUIMAUX. Will some of our whalemen or other navigators who go fishing and exploring way up in the Arctic regions, bring home a few skulls? They may always be found there on the surface of the earth or ice in any number unburied, in a state of perfect preservation, and be brought away without causing any pain or exciting superstitious feelings.

We have skulls from China, Japan, Egypt, the Fejee Islands—Cannibals—Africa, from all parts of Europe, and from various Indian tribes in North and South America. But we want that of an ESQUIMAUX.

THE inhabitants of Great Falls, N. H., have been afflicted and imposed upon by the pestiferous presence of one wicked pretender named *Gillett*. He is going about among strangers and "taking in" those who suffer themselves to come under his satanic influence. He is potent only for evil. Beware of him!

A NATURAL——KNOW-NOTHING.—The editor of a little *Dexter Gazette* printed "away down east," don't believe in Phrenology. Cause why? we *expect* he has had his head examined, and "been found wanting." What is the fact, Mr. Dexter Gem? If brains are lacking in your cranium, you are not to blame. Then why "snap and snarl" so? you can't help it. You are cunning enough to omit putting up your name as editor, and insert the portrait of a woman in the title. We pity your ignorance, laugh at your want of sense, but cannot hold you responsible for anything.

SAMPLE NUMBERS OF LIFE ILLUSTRATED.—Since changing the form of LIFE from a four-page folio to a handsome eight-page quarto, we have had numerous applications for sample numbers.

Desirous to give all who may wish an opportunity to examine the paper, we shall send specimen copies to some who are not subscribers, with the hope that the recipient may become a subscriber, or induce his friends and neighbors to join him in a CLUB, to commence now, with the beginning of a new volume. In its present quarto form it may be bound and preserved a lifetime. The instructive matter which it contains will be found worthy of a permanent form. We intend to make LIFE ILLUSTRATED one of the very best WEEKLY JOURNALS in America.

The Reflector is too dazzling to be seen; you can see where it ought to be, and where it would be if you could see it, but it is too glittering to look upon direct, a side glance is sufficient to satisfy any one. It is very large, nearly three feet in diameter, and concave. We should think it a parabola, with the light, a brilliant one, placed in the focus. It is a locomotive lamp, copper, coated on the reflecting surface with silver. It is about equal to the best glass reflector.

MR. CHARLES D. SUMNER will please accept our warmest thanks for the fine scull of a Stockbridge Indian, which he had the goodness to present to us. The skull will be placed among many others in our extensive Cabinet, for the use of students and the public.

Varieties.

LABOR: A PHYSIOLOGICAL ARGUMENT.—It is noticed by students of anatomy that many of the muscles which move the joints in the human body act under great mechanical disadvantage. They are attached to the bones so as to operate obliquely, and apply their force at the short end of the lever, near the fulcrum. In the case of the elbow, for instance, the muscle which moves the joint is fastened at one end to the bone of the arm near the shoulder, and at the other to a bone just below the elbow on the inside. The elbow-joint operating as a hinge, the contraction of the muscle has the effect to raise the whole of the lower arm, with the hand, and sometimes a superadded weight, though manifestly at a great loss of power compared with what the muscle would have if it were attached to the arm farther down, as at the wrist, instead of near the joint to be moved. Its operation is the same as if we should attempt to shut a door by pulling on a string fastened at the back part near its hinges. We could do it; but it would take several pounds of power in this situation to be equal to a single pound applied on the edge next to the latch. So in the case of most of the muscles—some anatomical investigator has calculated that only one-sixtieth part of their power is realized in direct action, the remainder being lost in overcoming the disadvantages of their mode of operation. We can imagine if this is the case what must be the actual strength of the muscular system in a stout man.

The counterbalancing considerations which led to this sacrifice of power in the arrangement of the muscles have reference, undoubtedly, to *beauty of form* and *celerity of action*, and are much handsomer and swifter than we should be if the muscles were so fixed in our various limbs as to have the advantage of the long end of the lever. If the muscle for lifting the arm and carrying weights extended from the shoulder to the wrist, which would be the most economical arrangement with reference simply to power, it would make an ungainly looking limb; the delicate inside angle of the elbow would be filled with a protuberant mass of flesh. On the other hand, the muscle so placed would require to contract three times as far as it does now to raise the arm, and consequently the action would be much slower.

It is obvious from this inspection of the mechanism of the muscular system that we were not constructed principally with reference to the exertion of *strength*, and hence arises an argument against the idea that man was made for heavy hand labor. If hard, incessant lifting and labor, like that which multitudes are now condemned to, was intended to be the proper destiny of man, he would have been constructed with more suitable provision for it in the arrangement of the muscles; the ninety per cent. of power which is now given up for the sake of beauty and speed would have been saved for strength. Man's true destiny, on the other hand, is to conquer nature by mind, intelligence, a good spirit, and social unity, and this will reduce the necessity of physical labor to the proportion which nature has indicated in the adaptation of the muscles.

SUBJECTS FOR ARTISTS.—Whilst speaking of our American Art, we must not forget that we have something to do with furnishing subjects; and whilst scenery is comparatively little within our control, the human figure is very much what we make it, and is monstrously abused. We are naturally a remarkably good-looking people; but we have done a great deal to spoil our looks, and it would be a very good thing for our Academy of Design to apply to the Supreme Court for a writ of Habeas Corpus, to rescue the human body from imprisonment and abuse at the hands of our false fashions and monstrous dietetics—from the fetters of buckram and whalebone—from the rum and tobacco which defile and deface so many of our men, and from the slops and confectioner's trash which give dyspepsia and the vapors to our women. Let us have a free and fair physical development, as the basis of a noble, intellectual, and social life—let us also be willing to be true to humanity in our own way, without aping every European folly, and who will doubt that a new day of beautiful taste and artistic genius will dawn upon us?—[*Dr. Osgood.*

LISTENING TO EVIL REPORT.—The longer I live, the more I feel the importance of adhering to the rules I have laid down for myself in such matters.

1. To hear as little as possible of whatever is to the prejudice of others.

2. To believe nothing of the kind till I am absolutely forced to it.

3. Never drink in the spirit of one who circulates an ill report.

4. Always to moderate as far as I can the unkindness which is expressed towards others.

5. Always to believe, that if the other side were heard, a very different account would be given of the matter.—[*Old Author.*

TRUTH.—To gain truth, which is the object of the understanding, I must seek it disinterestedly. I must choose to receive the truth, no matter how it bears on myself. I must follow it, no matter where it leads, what interest it opposes, to what persecution or loss it lays me open, from what party it severs me, or to what party it allies. Without this fairness of mind, which is only another phrase for disinterested love of truth, great native powers of understanding are led astray, genius runs wild, the light within us becomes darkness.

TOWNSEND THE MURDERER.—*Buffalo, Sept. 14th, 1855.*—MESSRS. FOWLER AND WELLS: I clip the following notice from *The Buffalo Express*, and would like to have your explanation of that peculiar feature of his ears standing out from the side of his head. Yours, &c., W. D. RECTOR.

"TOWNSEND THE MURDERER.—It was rumored, a day or two since, that this notorious scapegrace has been arrested; but the rumor, to the regret of all, has resolved itself into thin air. *The Brandford Herald* furnishes a minute description of him which we copy, for the sake, if possible, of aiding the ends of justice:

"'He is about five feet seven inches in height, dark complexion, black eyes and hair, sharp features, prominent jaw bones, tapering very much towards the chin; aquiline nose, upper part of the face very hollow; rather pleasing countenance. He avoids company, seldom conversing with any

one. In walking, he appears to be always in a studious mood, having his eyes fixed on the ground, his hands in his pantaloons pockets, and occasionally stops as though undecided in his movements. He is spare built, but well made, having very broad shoulders. He is a proficient on the violin and banjo, having travelled for some time with a circus company. He has never been addicted to liquor. When in any place of public resort, he generally selects a secluded place, sitting with his eyes fixed on the ground. He has no scar of any kind on his face. His ears are very large and stand out from the side of his head in a remarkable manner.

"'The reward is $1,000, and as we have said, whoever is fortunate enough to catch him, will be entitled to the thanks of the people of Upper Canada in the bargain.'"

[It is one of the evidences of very large Destructiveness. We presume his Self-Esteem was small. Phrenological examination would reveal his true character. If a likeness can be sent us, we will give it a place in the Journal, together with a description.—Ed's.]

A Tribute to Phrenology.—In a sermon lately preached by Rev. Henry Ward Beecher to the people of his charge, the following interesting passage occurs:

"And I may say here, what I never said before in the pulpit—that the views of the human mind, as they are revealed by phrenology, are those views which have underlaid my whole ministry; and if I have had any success in bringing the truths of the Gospel to bear practically upon the minds of men—any success in the vigorous application of truths to the wants of the human soul, where they are most needed—I owe it to the clearness which I have gained from this science. And I could not ask for the members of my family nor of a church, any better preparation for religious indoctrination, than to put them in possession of such a practical knowledge of the human soul as is given by Phrenology."

[Mr. Beecher has been a close observer of this interesting science, for more than twenty years. While he was a student in Amherst College, Spurzheim first visited America, at which time Mr. Beecher procured and studied the standard works on the subject, and became a thorough convert to the truth of its claims. He has, therefore, an *opinion* founded on absolute knowledge, *Observation*, Fact, and PHILOSOPHY.]

True Education.—The object of all true education is to vitalize knowledge. Some teachers instruct their scholars very thoroughly, who never educate them at all. They teach them to commit the rules of their arithmetic or grammar by heart, but never lead them to comprehend a single principle; make them learn the names of thousands of places, without giving them any idea of geography.

Smoking Arsenic with Tobacco.—M. de Montigny, French Consul in China, states that the inhabitants of the North of China mix arsenic with their tobacco, which they smoke in their small pipes. "This custom is peculiar to the provinces of Ho-Nou, and Het-Chouen, and Chan-Tou. The apostolic vicars of Mantchooria and Corea, who have lived long at Seao-Tou, have informed me that the population of this vast country smoke with relish the garlicky vapors of this pernicious drug. The employment of arseniated tobacco is so prevalent in that region, that they found it impossible to procure it free from all poisonous admixture. They were obliged to send to the central provinces for that which they smoked. The bishops whom I have cited, have likewise informed me that the arsenic smokers were beautifully plump, that their lungs worked like blacksmith's bellows, and that they were, moreover, as red as cherubims; for it is only the Southern Chinese who have the saffron complexion, which is attributed to the whole race."—*Jour. de Chimie.*

An Ingenious Invention.—An inventive genius, desirous of promoting the domestic rearing of hens, has invented a contrivance to keep them from scratching up the garden. It is a small instrument, somewhat resembling a very long spur, attached to the hind part of a hen's leg. The instrument is so arranged, that when the hen is about to scratch the earth, the spur catches in the ground before her foot has fairly descended, and obliges her to bring the foot down quietly and harmlessly a little in front of the place which she has aimed at. The hen thereupon tries the other foot, with a like result. She keeps on trying, and before she is aware of it, the machine has *walked her right out of the garden!* This will just be the thing when the hen fever returns.

Curious Chinese Proverbs—On Contentment.—The ripest fruit often grows on the roughest wall.

It is the small wheels of the carriage that come in first.

The man who holds the ladder at the bottom is frequently of more service than he who is stationed at the top of it.

Contentment is to the mind what a frame is to a cucumber—sunning it, and lifting it, even from a dunghill.

The turtle, though brought in at the area-gate, takes the head of the table.

Better be the cat in a philanthropist's family than a mutton pie at a king's banquet.

The Learned Pig didn't learn its letters in a day.

Grammar.—We lately met a grammarian, who had just made a tour through the mines, conjugating, or, rather, cogitating thus: "Positive, *mine;* comparative, *miner;* superlative, *minus!*"

A JOKE AT OUR OWN EXPENSE.

"A little nonsense now and then,
Is relished by the wisest men."

The Yankee Blade gets off the following story:—

The Phrenologist Posed.—An itinerant phrenologist was passing through one of our New England villages, stopping at each house he passed, in hopes of making his scientific acquirements the means of putting a stray quarter into a pocket-book which was far from being plethoric.

Among others, he stopped at a rustic farm-house, the proprietor of which was busily engaged in the backyard, in splitting up wood for consumption in the approaching winter.

The old farmer did not take much notice of our phrenologist, who, after watching the axe ascend and descend a few times, ventured to broach the object of his visit, by saying—

"Sir, I am a phrenologist. Would you like to have me examine the heads of your children? I will do it cheap?"

"Wall," said the farmer, pausing between two strokes, "I rayther guess they don't need it. The old woman *combs 'em with a fine-tooth comb, once a week!*"

The phrenologist cast a look of mingled pity and contempt upon the man who had so misunderstood the nature of the science which he professed, and went on his way, a sadder, but not a richer man.

[We hardly know which to admire most, the verdant impudence of the young Professor, or the stupid indifference of the Bushwhacker.]

The Fruit Trade.—Some thirty vessels are engaged in the fruit trade between New York and the West Indies. A much larger trade in fruits is carried on with ports in the Mediterranean, which supply annually something like seventy or eighty cargoes—principally oranges. The West India importations of last year are estimated as follows:—

Seventy-five thousand bunches of bananas from Baracoa sold here at from $1 25 to $1 50 per bunch—$93,750 to $112,500; 2,000,000 Baracoa cocoa-nuts sold at from $25 to $30 per hundred—$500,000 to $600,000; 20 cargoes of pine-apples from Matanzas and Havana averaging 80,000 dozen per cargo, sold at from $8 to $12 per 100—$128,000 to $192,000; 20,000 dozen St. Bart. pines, sold at from $7 50 to $8 per 100—$18,000 to $19,000; 200,000 dozen from the Bahama Islands—$15,000 to $16,000; 10 cargoes of Havana oranges averaging 250,000, at 3 cents each—$10,500, have been received thus far the present season, the crop being more abundant than at any time during the last fifteen years. West India oranges arrive in October, and are most abundant in January and February. Bananas and pineapples begin to arrive about the first of April, and are most plentiful during the succeeding three months. Cocoa-nuts arrive all the year round. Mediterranean oranges, which come in boxes, and are most extensively shipped to different parts of the United States, begin to be received in January, but not extensively until April or May.

The above list comprises but few of the foreign fruits imported—and these only from the West Indies. A few minutes' calculation will show the sum paid for the articles enumerated in the list amount to not less than $850,000. The total amount paid for foreign fruit last year was not less than $20,000,000.

Our exports are comparatively trifling. With the very best soil and climate in the world for growing fruit, embracing twenty-three degrees of latitude, we pay out annually to foreign countries cash enough to stock a Territory with the choicest varieties of fruit trees. Besides, fruit grown in our own soil and climate is better adapted to our people, and far more healthful than that which is imported from other climates.—*Life Illustrated.*

New Gridiron.—Among the many curiosities and improvements at the Fair of the American Institute, may be seen in operation *Robinson's double-acting, downward draught Gridiron*, or Broiling Apparatus, an unquestionable improvement, being so constructed as to bring the heat of a wood or coal stove into direct contact with the meat, without a particle of smoke or blaze. By this Apparatus, the natural flavor of the meat is preserved; being cooked in its own juices, instead of grease or butter, which saturates the meat, and destroys its flavor. All the gravy that may exude from the meat is saved and cooked, without being burned or overheated. All that bespattering of burned fat, and those greasy fumes in the room, incident to the old gridiron or fry process, are entirely obviated.

It is established beyond question that broiled meats are more nutritious and easier of digestion than when fried, and if people *will* eat meat, it behooves them to see that it is not rendered more deleterious in cooking. Those who still cling to their flesh-pots, are recommended to examine this invention at No 520 Broadway.

Advertising.—In one of the proverbs of Solomon, says the *New Bedford Mercury*, we find the most comprehensive and satisfactory exposition of the philosophy of advertising that ever was, or could be written, viz.:

"There is that scattereth and yet increaseth, and there is that withholdeth more than is meet, but it leadeth to poverty."

And the words of Paul to the Corinthians aptly express the same idea:

"He which soweth sparingly shall reap also sparingly; and he which soweth bountifully shall reap also bountifully."

[All very well; but what particular advertising medium or paper did Solomon or Paul refer to? Was it not an *agricultural* comparison which those sages wished to impress?]

How Our Bodies are Made Up.—The following is a forcible illustration of the way we supply the natural waste of the body:

"Let it be remembered that, to take food is to make man. Eating is the process by which the noblest of terrestrial fabrics is constantly repaired. All our limbs and organs have been picked up from our plates. We have been served up at table many times over. Every individual is literally a mass of vivified viands; he is an epitome of innumerable meals; he has dined upon himself, supped upon himself, and in fact—paradoxical as it may appear—has again and again leaped down his own throat."—*Buffalo Christian Advocate.*

[How important, then, that we renew our bodies with the very *best material.* Should it be formed of fish-flesh and fowl? tea, coffee, and tobacco? or, should it be composed of delicious fruits? wheat, corn, rye, barley, rice, and ripe vegetables? The subject is worthy of some attention. See Smith's Fruits and Farinacea, with notes by Dr. Trall, published at this office, for a complete elucidation of this important subject.

Concealed Weapons.—A law against concealed weapons has just been passed by the Legislature of Louisiana. The first section declares that whoever shall carry a weapon or weapons concealed on or about his person, such as pistols, bowie-knives, dirks, or any other dangerous weapon, shall be liable to prosecution by indictment, and on conviction, for the first offence shall be fined not less than two hundred and fifty dollars, nor more than five hundred dollars, or imprisonment for one month; and for the second offence not less than five hundred dollars nor more than one thousand dollars, or imprisonment in the parish prison at the discretion of the court, not to exceed three months.

[Will not all the other States follow this example? There would be less "shocking murders" to be recorded in all the papers. We think it cowardly, and disgraceful, to be thus armed, in a civilized and *Christian* community. Let us have the law against "concealed weapons." Who will take the necessary steps?]

Advertisements.

A LIMITED space of this Journal will be given to Advertisements, on the following terms:

For a full page, one month, . . .	$75 00
For one column, one month, . .	20 00
For a half column, one month, . .	12 00
For a card of four lines, or less, one month,	1 00

MAYHEW'S PRACTICAL BOOK-KEEPING, BY SINGLE AND DOUBLE ENTRY, with a set of Account Books to be used by the Learner in writing up the Examples for Practice contained in the Book-Keeping, and a Key for Teachers, containing their Solution. By IRA MAYHEW, A. M., Superintendent of Public Instruction in Michigan, author of a Treatise on Popular Education, &c.

The Publishers would respectfully call the attention of Teachers, School Officers, and the friends of Education generally, to this work, which has been strongly recommended by the principal Book-keepers of extensive Business Houses in New York; by the Superintendent of Common Schools for the City and County of New York; by the Principal of the New York Free Academy; by the Principals of the Public Schools generally, and of all the Ward Schools in the City and County of New York; by the Principals of all the Public Schools of the Cities of Brooklyn and Williamsburgh, and by the Teachers generally of other schools, both public and private, to whose knowledge it has been brought.

Such unanimity and strength of testimony, including the Principals of all the Public Schools of those three cities, is unprecedented; and still this work has been received with equal favor wherever it has become known, having been introduced into the schools of a large number of cities and towns in every part of the United States within the brief space of three months from its publication, including several female colleges in as many different States, the high schools of a large number of cities, and an almost incredible number of academies and common schools scattered through the fifteen States. It will be observed, also, that teachers who have tested this work in the school room, bear the strongest and most cordial testimony in its favor.

TESTIMONIALS FROM PRACTICAL EDUCATORS.

"Mayhew's Practical Book-keeping is better adapted, in my judgment, to the ordinary business of the great majority of the people of our country than any treatise that has hitherto been used. * * * I feel greatly disposed to favor its use."—JOSEPH MCKNIGHT, Superintendent Com. Schools, City and County of N. Y.

"This is the only really practical system of elementary Book-keeping that has fallen under my observation. It is brief, lucid, and comprehensive, and contains, under a variety of forms, all the general principles required to be known in recording ordinary mercantile transactions. Its extensive introduction into schools, will, in my opinion, confer a great blessing on popular education."—E. L. AVERY, Principal Ward School No. 27, N. Y. (Concurred in by twenty other Principals.)

"I fully concur in the testimony of Mr. E. L. Avery; and, in addition, I would state that I introduced the work into my Evening School about the middle of the late term. My pupils were delighted with it, and made more rapid progress in it than in any book I ever used. They liked the book because they understood it. Indeed, so little assistance did even the least advanced of my pupils require that I deem the work truly entitled to be called 'Book-keeping without a Master.'"—WM. F. MOSS, JR., Principal Ward School No. 21, N. Y. (Concurred in by other Principals.)

"Mayhew's Practical Book-keeping is a capital work. It is well fitted for use in our Common Schools in New York, and I cordially recommend its introduction both here and elsewhere."—THOMAS E. POULSE, Principal Ward School No. 13, N. Y.

OPINIONS OF THE PRESS.

"This is a plain, brief treatise, by the late able Superintendent of Public Instruction in Michigan, whose labors in another department of education have given him an eminent position among the friends of popular improvement in this country. It is not a mere compilation, but presents several original features of great value. By its perfect clearness of exposition, its admirable arrangement, and the multiplicity of examples by which its theoretic principles are illustrated, it is well adapted to common use. No work on the subject, that we have seen, can be more safely recommended to farmers and mechanics, as exactly suited to their wants."—NEW YORK TRIBUNE.

Price 42 cents.

Copies sent by mail, postage paid, on receipt of price. DANIEL BURGESS & CO., Publishers,
Nov 21 b No. 60 John st., New York.

STRAUSS'S LIFE OF JESUS, Critically Examined. Elegant 8vo, 901 pp. Steel Portrait. $3 50.

COMBE'S POSITIVE PHILOSOPHY. Second Edition. Steel Portrait. Elegant 8vo, pp 688. $3.
"The greatest work of our century."—LEWES.

FUERBACH'S ESSENCE OF CHRISTIANITY. 12mo. pp. 462. $1 25.

GREG'S CREED OF CHRISTENDOM: Its Foundation and Superstructure. 12mo. $1 25.

HOWITT'S HISTORY OF PRIESTCRAFT IN ALL AGES AND NATIONS. 12mo. 75 cents.

BOCCACCIO'S DECAMERON, or, Ten Days' Entertainment. Beautiful 12mo, pp. 600, with 10 Steel Engravings. Order from
FOWLER AND WELLS, 308 Broadway.

THE
ILLINOIS CENTRAL RAILROAD COMPANY
IS NOW PREPARED TO SELL OVER TWO MILLIONS OF ACRES OF SELECTED
PRAIRIE, FARM AND WOOD LANDS,
IN TRACTS OF 40 ACRES AND UPWARD,
To suit purchasers, on long credits and at low rates of interest.

They were granted by the Government to encourage the building of this Railroad, which runs from the extreme north to the extreme south of the State of Illinois. It passes from end to end, through the richest and most fertile Prairies of the State, dotted here and there with magnificent Oak Groves. The recent opening of nearly 600 miles of this road throws open the lands for cultivation. They are scattered from one to fifteen miles on each side of it, through the entire length.

The soil is a dark, rich mould, from one to five feet in depth, is gently rolling, and peculiarly fitted for grazing cattle and sheep, and the cultivation of wheat, Indian corn, &c.

The first crop of Indian corn planted on the newly broken prairie usually pays the cost of ploughing and sometimes fencing. Wheat sown on newturned sod is sure to yield very large profits. One man with a plough and two yoke of oxen will break one and a half to two acres per day. Contracts can be made for breaking, ready for corn or wheat, at $2 to $3 50 per acre. By judicious management farms may be broken and fenced the first, and under a high state of cultivation the second year.

The larger yield on the cheap lands of Illinois, over high-priced lands in the Eastern and Middle States, is known to be much more than sufficient to pay the difference of transportation to the Eastern market. The rapid increase and growth of flourishing towns and villages along the line of this road afford a growing home demand for farm produce.

Coal and wood are delivered along the road at different points, at from $1 50 to $4 the cord or ton.

Parties having in view Iowa, Kansas, Nebraska, or Minnesota for their future homes should take into consideration, that the country west of the Mississippi is destitute of railroads; that the conveniences of transporting grain and produce from farms on the line of the Illinois Central Railroad direct to the great Eastern market, is sufficient of itself to pay the investment at from $10 to $15 per acre higher than in government lands in Iowa. In other words, that it costs so much more to get produce from the interior of the country west of the Mississippi to the Eastern market, that the farmer will find it much more profitable to locate on the line of this railroad.

PRICE AND TERMS OF PAYMENT.

The price will vary from $5 to $15, according to location, quality, &c. Contracts for deeds may be made during the year 1855, stipulating the purchase money to be paid in five annual instalments—the first to become due in two years from date of contract, the others annually thereafter. The last payment will become due at the end of the sixth year from date of contract.

By the 22d section of the Act of the Legislature, approved 10th February, 1851, these lands are free from taxation until they are paid for, and a deed of conveyance granted to the purchaser.

INTEREST WILL BE CHARGED AT ONLY TWO PER CENT. PER ANNUM.

As a security for the performance of the contract, the first two years' interest must be paid in advance, but it must be understood that one tenth of the land purchased shall yearly be brought under cultivation. Longer credit at six per cent. per annum may be negotiated by special application. Twenty per cent. from the credit price will be deducted for cash, in which case the Company's Construction Bonds will be received as cash.

It is believed that the price, long credit and low rates of interest charged for these lands, will enable a man with a few hundred dollars in cash, and ordinary industry, to make himself independent before all the purchase money becomes due. In the mean time the rapid settlement of the country will probably have increased their value four or five-fold. When required, an experienced person will accompany applicants, to give information and aid in selecting lands.

Large Plats, showing the precise location of the Lands throughout the State, may be seen at the office. Small pocket Plats, as a guide to any part of the Company's Lands, and pamphlets containing interesting information, accompanied by numerous letters from respectable farmers throughout the State, may be had on application at the office of the Company, No. 52 Michigan-av., Chicago.

CHARLES M. DU PUY, Jr.,
Oct. 21. Land Agent Central Railroad Co.

SMITH'S GEOGRAPHICAL SERIES.

The Series of Geographies, by Roswell C. Smith, consists of

SMITH'S PRIMARY GEOGRAPHY; or, First Book.
SMITH'S QUARTO GEOGRAPHY; or, Second Book.
SMITH'S GEOGRAPHY AND ATLAS; or, THIRD BOOK, which includes both Modern and Ancient Geography.

This series of Geographical Works is believed by the publishers to be far superior in the most important features to any others now before the public;—in the admirable definitions here given of Geographical terms; in the clearness, brevity, and explicitness of the descriptive parts of the series; in the excellent and highly attractive questions and answers; and in the great amount of valuable instruction which is herein imparted by a system of emblems, abbreviations, steamboats, crosses, &c., on the face of the maps, which serve to make a striking and lasting impression upon the memory. The study of this series of books is found to be always pleasing, because they are so readily understood by the learner; and it is the united testimony of eminent teachers, that pupils who have used SMITH'S GEOGRAPHIES always answer well in public examinations. The publishers are confident, knowing the results of frequent experiments, that a class of scholars using these works will acquire, in a given time, a marked increase of proficiency over those whose studies in Geography have been pursued according to the unsatisfactory plans of various other text books. This is the highest school book, and to the SMITH'S GEOGRAPHIES have been subjected repeatedly and successfully.

Published by DANIEL BURGESS & CO.,
Oct. 21 b No. 60 John st., N. Y.

In Press:
THE BEETHOVEN COLLECTION
OF SACRED MUSIC.

Edited by E. IVES, Jr., W. ALPERS, and H. C. Timm.—The publishers have in press a new edition of this standard collection of Sacred Music, and will shortly offer the work to the public greatly enhanced in value. More than fifty pages of additional Music will be given, and the general arrangement of the book greatly improved. It will contain themes now first arranged from the instrumental compositions of Beethoven, Haydn, Mozart and other eminent composers; together with a great number of original Tunes, Chants, and Anthems—the whole harmonized in four parts, with an accompaniment for the Organ, adapted also for the Piano-forte. Eminent critics have pronounced the music contained in this work to be the most excellent ever produced in this country. To more than two hundred spacious pages of music the editors have prefixed their admirable "Method of Instruction," which ignores the plan of solfaing by mutation, and substitutes a readier mode of acquiring the art of reading music. This new and enlarged edition will be invaluable to church choirs; while all who are desirous of possessing a collection of sacred music that shall be sacred not merely in name, will find the beautiful volume a treasury of delightful compositions which cannot fail to please the taste, and elevate and inspire the thought. Large quarto volume. Price $1 50.

DANIEL BURGESS & CO., Publishers,
Oct. 21 b. No. 60 John st., New York.

Just Published.
"TOWER'S GRAMMAR OF COMPOSITION; OR, GRADUAL EXERCISES IN WRITING THE ENGLISH LANGUAGE."

This takes hitherto unoccupied ground, and consists mostly of Exercises in Grammatical forms, being a practical application of the principles of grammar on a new plan to establish the habit of writing correctly. After this habit is fixed, the next important step in Composition is Arrangement. This is taught in a manner entirely new, giving but one process at a time, so simplifying the work as to render essential aid to the teacher in establishing a correct systematic method of thinking and writing. Price 62½ cents. Published by

DANIEL BURGESS & Co., No. 60 John st., N. Y.

[From the New York Observer.]

"The plan and execution of this little book are admirable. It is designed for the young learner, as an introduction into the art of 'writing composition,' and does not, as is the case—which generally serve only to burden the memory with a useless weight—but begins at once with entertaining examples and exercises. There is a better way of learning than by heart—it is learning by practice; and this is the mode of teaching which the experienced authors of this volume propose. We give no new book a warmer welcome than one which is fitted for the use of children, and designed to lessen their early difficulties in the way of acquiring knowledge. 'Going to school' is often an irksome thought, even to the intelligent scholar; and any successful attempt to lighten the load of little learners, is worthy of a word of commendation. This is a well-aimed and well-executed book, and we doubt not will be highly useful in the sphere for which it is adapted."

Copies sent by mail, prepaid, on receipt of price.
Nov 21 b

MISTAKES OF DAILY OCCURRENCE.—SPEAKING, WRITING AND PRONUNCIATION CORRECTED.—A Pamphlet of 38 pages, which points out all the vulgarisms which are constantly used in conversation and writing, and shows the proper words and conversation to be used. This is a valuable book for persons who wish to refine the conversation, as by a very little study of it they will become as correct talkers as the best educated persons. Price 25 cents. Sent by mail, postage paid. Address the Publishers,
DANIEL BURGESS & Co., No. 70 John st., N. Y.
Nov 21 b

NEW YORK CENTRAL COLLEGE.—This Institution is now in a prosperous condition. It has a Collegiate and Academic Department, in both of which the courses of study are elevated and profitable.

It is entirely unsectarian, and by surrounding all, rich and poor, black and white, male and female, with equal facilities, stands opposed to the spirit of caste in all its phases. Character, not color, circumstances, or sex, is the basis of respect.

Labor is regarded as eminently honorable, and is furnished to students to as great an extent as possible. Those availing themselves of this privilege, can acquire an education with comparatively little expense.

This Institution is located at McGrawville, Cortland Co., N. Y.

On the afternoon of Monday, Tuesday and Wednesday preceding the commencement of each Term, carriages will be at Cortland to convey students to McGrawville, free of charge.

The Winter Term commences Thursday, Dec. 13th, and continues thirteen weeks.

Inquiries concerning the character and advantages of the Institution should be addressed to Leonard G. Calkins, President.

P. S.—To accommodate those who wish their sons under his immediate care, President Calkins will take a number of students into his own house, and furnish board, fuel, lights, room and tuition for one hundred and fifty dollars per year. Nov.

FOWLER AND WELLS' PATENT AGENCY DEPARTMENT.

We have established, in connection with our already extensive business, a department for transacting all kinds of business pertaining to PATENTS, or PATENTED INVENTIONS either in the UNITED STATES or FOREIGN COUNTRIES.

Advice in cases of Reissues, Extensions of Patents, conflicting claims and rejected applications, will be freely given in answer to letters stating the circumstances of the case.

Those trusting their business with this Office are assured that it will be conducted with CARE and PROMPTNESS, upon the most LIBERAL TERMS.

Inventors who wish to know if their inventions are patentable, should enclose a stamp to prepay the answer.

Models for this Office should be forwarded by Express (or other safe conveyance), carefully directed to FOWLER AND WELLS, 308 Broadway, New York, to whom all communications should be addressed.

Letters and freight must be prepaid, in order to ensure attention. Nov.

INVENTORS AND OWNERS OF PATENTS

Are informed that we are prepared to accept of AGENCIES FOR THE SALE OF PATENT RIGHTS for all NEW INVENTIONS and IMPROVEMENTS of practical utility; or for the introduction of such articles, made under those rights, as shall be of value to the public.

Our advertising facilities in connection with our Journals and other publications—facilities which extend to all classes of mechanics and business men—enable us to represent these Improvements to Progressive and Energetic men throughout our country.

Terms may be settled by communications with parties interested.

Address FOWLER AND WELLS,
Nov. 308 Broadway, N. Y.

LECTURES.

The subscriber having purchased the most splendid and extensive Lecturing Apparatus in the world, comprising the best French Manikins, Skeletons, models of all parts of the human system, and extensive specimens of morbid anatomy of all kinds of diseases, with over fifteen hundred superior paintings and drawings, brilliantly illustrating in life-like colors, every part of the system and characters of life—all of which have recently been imported from Paris—is prepared from a long experience in public lecturing, to give courses of Scientific, Useful and Amusing Lectures on the laws of Health and PHYSIOLOGY OF LIFE.

Literary Societies and others wishing for his services, will be attended to by addressing him at Lockport, Niagara Co., N. Y. H. KNAPP, M. D.
Lockport, N. Y., Sept. 1 1855. Oct. tb

HUDSON RIVER RAILROAD.

FALL ARRANGEMENT.—On and after Monday, October 15th, 1855, the Trains will run as follows:—For Albany and Troy, Express Train 6 A.M., connecting with Northern and Western Trains; Mail Train, 9 A.M.; Through Way Train, 12 M.; Express Train 5 P.M. For Hudson, 4 P.M. For Poughkeepsie:—Way, Freight, and Passenger Train, at 1 P.M.; For Peekskill:—7 A.M. and 6:30 P.M. For Sing Sing:—3:30 and 8:30 P.M. For Dobbs' Ferry, 10:15, A.M. and 5:30 P.M. The Dobbs' Ferry, Sing Sing, Peekskill and Hudson Trains stop at all the Way Stations. Passengers taken at Chambers, Canal, Christopher, and Thirty-first streets. SUNDAY MAIL TRAINS at 5 P.M., from Canal street for Albany, stopping at all Mail Stations.

M. L. SYKES, JR., Superintendent.

A Beautiful Almanac to Give Away!

POOR RICHARD FOR 1856;—Being a Complete Almanac for the whole United States, and containing, besides full and ample calendars for all the States, Twenty Spirited Engravings, illustrating the Maxims and Sayings of Poor Richard (Dr. Franklin). The Pictures are printed on superfine hot-pressed paper, and go to illustrate the following pithy Maxims:

1. Plough deep while the sluggards sleep, and you shall have Grain to sell and to keep!
2. Pride is as loud a beggar as Want, and a great deal more saucy.
3. Silks, Satins, Scarlets and Velvets, put out the kitchen fire.
4. Diligence is the Mother of Good Luck.
5. Pride breakfasted with Plenty, dined with Poverty, and supped with Infamy.
6. Extravagance and Improvidence end at the Prison Door.
7. It is easier to build two Chimneys than keep one in fuel.
8. If you would know the value of Money, go and try to borrow some.
9. The eye of the Master will do more work than both his hands.
10. What maintains one Vice would bring up two Children.
11. He that goes a Borrowing goes a Sorrowing.
12. Rather go to bed supperless than rise in Debt.
13. Sloth, like rust, consumes faster than labor wears.
14. A life of Leisure and a life of Laziness are two different things.
15. Creditors have better Memories than Debtors.
16. Three Removes are as bad as a Fire.
17. The Rolling Stone Gathers no Moss.
19. If you would have your business done, go!—If not, send!
19. It is foolish to lay out Money in the purchase of Repentance.
20. Buy what thou need'st not, and thou shalt sell thy necessaries.

This Almanac is a book of 32 pages, elegantly printed, and put up in a delicate Pink Illustrated Cover, suited to the centre-table. It is no cacchemy affair, but a really pretty and entertaining Book of Pictures. As we printed it for our customers, we hereby offer to give it away to anybody who asks for a copy. If you desire a copy to be sent by mail post-paid, please send a 3 cent stamp to prepay the postage—or eight stamps will prepay postage on a dozen copies, if you want so many. If it is ordered to be sent without our prepaying postage, we will send it for nothing. Direct your orders to B. H. DAY, 48 Beekman street, New York.

New Edition, Revised and Improved.

THE PHONOGRAPHIC TEACHER: Being an inductive exposition of Phonography, intended as a school book and to afford complete instruction to those who have not the assistance of an oral teacher. By E. WEBSTER.

Mr. Webster was one of the earliest and best teachers of Phonographic reporting in America. His pupils were among the first to find a seat on the floor of Congress as Reporters. This work is designed to embody the author's experience as a teacher, and to enable the learner to begin with the Elements and rise to be a complete phonographic writer in the corresponding style. This Edition has been thoroughly revised by Andrew J. Graham, editor of the Universal Phonographer, under the direction of the American Writing and Printing Reform Association, and contains *all the latest improvements* in Phonography, and may be relied on as *the very best work on the subject extant.*

We will send the Teacher, post-paid, by mail to any post-office in the United States or Canada, on receipt of forty-five cents.

FOWLER AND WELLS, 308 Broadway, N. Y.

THE MORE TEACHERS USE IT THE BETTER THEY LIKE IT.

To every Teacher and every School Committee we would say, examine TOWER'S ELEMENTS OF GRAMMAR, and if you have a child or a class studying grammar, for once at least try it.

A copy of the work will be sent by mail, postage paid, on receipt of 25 cents.

DANIEL BURGESS & CO., Publishers.
No. 60 John St., New York.

WORK FOR ALL, AND WORK THAT PAYS—In selling, in every county in the United States, our very POPULAR AGENTS' BOOKS, 180 different kinds. Terms, Catalogues, &c., sent on application to MILLER, ORTON & MULLIGAN, Auburn and Buffalo.

PATENT ELASTIC WATER-PROOF ROOF COATING AND PAINT.

A new discovery, cheap and Indestructible, Impervious to Water, Incombustible, Elastic, and possessing almost Imperishable qualities.

☞ There is no ASPHALTUM, TAR or PITCH in this COMPOSITION, and it will not affect the quality of the water.

WARRANTED not to CRACK or SCALE; possessing, by its Elasticity, every property necessary to conform to the metal or other article on which it is applied, a uniform and unchangeable body, without regard to the EXTREMES of heat and cold in any climate.

A coating of this article can be applied on CANVAS, forming a roof more durable than TIN, and at one half the cost. A very desirable feature in this valuable coating is, that it can be applied to old and RUST-EATEN METAL ROOFS, and render them perfectly impervious to water, and as durable as NEW TIN or metal ROOFS, one coat being equal to SIX COATS of ordinary paint.

THE ELASTIC WATER-PROOF PAINT.

THIS PAINT possesses all the qualities of durability and elasticity, and is superior to any article yet discovered for all painting exposed to the elements, and can be applied on METAL, WOOD, CANVAS, &c., with equal facility to any Paint in use, at much less cost.

It can be varied in all the dark shades of color, and is without doubt the best article ever discovered for outside painting, such as SHIPS USE, IRON VESSELS, OUTSIDE IRON OR WOODWORK, and is most valuable for ROOFS, SHIPS' BOTTOMS, STEAMBOAT SMOKE-PIPES, or other work constantly exposed to the action of the water.

Either of the above articles will be applied at the shortest notice under the immediate supervision of the Manufacturers; or can be obtained, with directions for use, in any quantities, put up in packages of every desirable size. For further Particulars, Samples, or Orders, address or apply to

DICKINSON & DUMONT, 100 Water Sreet, N. Y.
Nov 1t b E. L. GILBERT, *Agent.*

LADIES,
TRY
DICK'S
SPOOL COTTON.
ASK FOR IT WHEN
SHOPPING.

Buyers please note it can be had of
July 6 tr ROBERT LOGAN, 51 Dey Street, New York.

UNDER-GARMENTS, GLOVES, HOSIERY, AND GENTLEMEN'S FURNISHING GOODS.

AN EXTENSIVE and Superior Variety of the above goods at the Lowest Prices for which they can be purchased in this Country, will be found at the well-known Importing and Manufacturing Establishment of

UNION ADAMS,
No. 591 BROADWAY, (opposite the Metropolitan Hotel,) NEW YORK.

15,000 Copies Sold in Three Months!

THE NEW STAR OF THE SOUTH.—Says the Mobile *Daily Advertiser* in a lengthy review of MARION HARLAND'S new Book,

THE HIDDEN PATH:

"It is refreshing, in these times of cheap literature and intellectual namby-pambyism, to find a volume written with a purpose and sustaining a character for ability and interest worthy of the better days of our literature. It is especially pleasing, in the multitude of demands made upon the Southern press to encourage and beguil productions without merit, merely because a Southern instead of a Northern dunce claims the honor of their paternity, to find books written by natives and residents of the South, that can afford to discard sectional preferences or prejudices, and boldly challenge criticism or approval on their intrinsic merits, as able and deserving contributions in the cause of good morals and pure literature. Such a book, in our opinion, is the 'Hidden Path,' and its author has a right to claim peership with the most accomplished and brilliant female novelist of the day.

* * * * *

"To us our review has been truly a labor of love, and we cordially commend all who desire a rich intellectual treat, abounding in lessons of wisdom, morality, and true happiness, to the absorbing pages of 'The Hidden Path.'"

One neat 12mo. Price $1 25. J. C. DERBY, Publisher, No. 119 Nassau st., New York, and for sale by all booksellers. Single copies sent by mail on receipt of price.

ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS for 1856 is now ready. It is embellished with *One Hundred and Fifty Engravings*, and contains, among other valuable matter, six designs for Farm Houses, five plans for Barns, three designs for Carriage and Poultry Houses, four for School Houses; descriptive lists of all the best varieties of different kinds of Fruits, with general rules for planting and managing Fruit Trees; an article on Grapes, with designs for Grape Houses; a chapter on Ornamental Planting. The Dairy Farm Machinery, Domestic Animals, &c., together with a collection of interesting facts for farmers and housewives.

The price of the Register is only Twenty-five cents. The trade supplied. Address

FOWLER AND WELLS, 308 Broadway, N. Y.

A NEW SECTIONAL MAP OF WISCONSIN—the most elaborate and accurate of anything yet published. It contains all the recent Surveys, and exhibits with exactness the Position of the numerous thriving villages which have sprung into existence so rapidly within the past few years.

Persons about locating land will find this the only reliable Map published for this purpose.

Price 75 cents. Single copies sent by mail, postage paid, on receipt of price by

DANIEL BURGESS & Co.,
Nov 1t b No. 60 John st., New York.

DR. TRALL'S ANATOMICAL & PHYSIOLOGICAL PLATES.

These plates, which were arranged expressly for the New York Hydropathic Medical College, and for Lectures on Health, Physiology, &c., by H. A. Daniells, Anatomical Draughtsman, are now completed.

They are six in number, representing the normal position and life size of all the internal viscera, magnified illustrations of the organs of the special senses, and a view of the principal nerves, arteries, veins, muscles, &c. For popular instruction, for families, schools, and for professional reference, they will be found far superior to any thing of the kind heretofore published, as they are more complete and perfect in artistic design and finish.

Price for the set, fully colored, $9; backed and mounted on rollers, $12. For sale by FOWLER AND WELLS,

308 Broadway, N. Y.

LAWTON'S BLACKBERRY PLANTS.

PRICE REDUCED.

A package of half a dozen, three dollars.
A package of one dozen, five dollars.
A package of fifty plants, fifteen dollars.
A package of one hundred, twenty-five dol'rs.

All the plants are of the genuine variety, thus happily described in a late Massachusetts paper ("Springfield Republican"): "The Lawton Blackberry is the queen of all berries, of most magnificent proportions, exquisite flavor, and delicate texture."

Packed in the best manner free of charge. Orders supplied in rotation as received, commencing about middle of October.

Address WM. LAWTON,
No. 54 Wall st., New York, or,
Oct 2t b New Rochelle, N. Y.

BOOK ILLUSTRATIONS,
Portraits, Buildings, Views, Machinery, Labels, seals, Bank Checks, Bill Heads, Business Cards, Ornamental Designs for Color Printing, &c., engraved in the best style
229 Broadway,
One door above the Astor House N.Y

Important to Schools and Academies.

Just Published by A. RANNEY, No. 195 Broadway, Johnson's Great Work for Schools, being a Series of ten large PHILOSOPHICAL CHARTS, Each 34 by 51 inches, neatly Mounted and Colored, accompanied by an Explanatory Key. Designed for the use of Schools and Academies. Price with Key, $15 per set.

This work in its plan and arrangement is entirely new, embracing, besides several original illustrations, all the essential Diagrams contained in the popular and commonly used Text-Books upon this branch of Education, numbering about 300 Drawings illustrative of all the great outline principles of Natural Sciences, as generally taught in Schools and Academies.

The Charts are accompanied with a Key of Explanation designating the several Diagrams, showing what each illustrate, and in most instances giving in brief the essential explanation.

The key and Charts are not intended to take the place of a regular text book, but to accompany such—to aid the instructor in teaching and the pupil in learning and retaining the principles contained in the regular Text-Book. The ingenious teacher, will be able to impart, and the scholar to retain, more instruction with the Charts and without the Text-Book than with the Text-Book without the Charts.

They are especially designed to supply the wants of scholars and teacher in the absence of the apparatus, which is too extensive to be generally adopted. Of the Common Schools and Academies that have now come to be in great need of it, hardly one in a thousand can afford the apparatus, many thousand dollars being required to purchase what is represented by these Charts, which serve the general purpose of a complete apparatus, and in some respects answer better, delineating many things which by the latter could not be shown at all in the school room.

The Charts are printed with white lines on black ground, and most of the Diagrams colored, making them distinctly visible from any part of the largest school room, preventing them from becoming soiled, besides giving them a neat, lively, and ornamental appearance.

N. B.—Active, enterprising men wanted to sell these Charts throughout the United States and Canadas, to whom very liberal inducements will be offered. For terms and full particulars address

A. RANNEY Publisher,
Nov. 195 Broadway, N.Y.

ELECTRO-CHEMICAL BATHS.—The late and very important discovery, that mercury, lead, and other minerals can be extracted from the human body, by means of an Electro-Chemical Bath, is about to make a new era in medical science. When this discovery was first made, it was thought that the whole body must be immersed in the bath; subsequent experiments, however, have shown that a foot-bath produces the same effects.

The results from the foot-bath are of the most decided character. Take, for instance, a patient drugged with mercury and preparations of lead, analyze the water of the foot-bath, and the result is as follows: First, the revived mercury appears in metallic form on a plate of copper at the negative pole; the lead also appears in the form of an oxide. Subject the water, first to the chemical test of sulphuret of iron, and immediately a precipitate of lead appears, according with the test. Test the water with iodide of potash, and forthwith a red precipitate appears, indicating the presence of mercury. I invite the public to witness these interesting experiments daily in my medical rooms.

I have now commenced the manufacturing this apparatus, and will execute orders for the same from any part of the Union, or elsewhere.

The price of the Battery, with full directions for running it, is $50. Price of foot-bath tub, $5.

All orders punctually executed. Address

SAMUEL R. SMITH,
Electro-Magnetic Therapeutist, 17 Canal street, New York.

Orders also received by FOWLER AND WELLS, and by the principal wholesale druggists in this city.

THE GOOD TIME HAS COME!

THE CROPS ARE ABUNDANT, AND PROSPERITY ABOUNDS!

And Farmers and others should now prepare for the enjoyment of the fruits of their labor, by securing, among other requisites to fireside happiness, a copy of MOORE'S RURAL NEW YORKER, the leading Agricultural, Literary, and Family Newspaper. It is THE PAPER for yourself and family, and indispensable during the long evenings which are coming on apace.

The NEW YORKER comprises departments devoted to Agriculture, Horticulture, Mechanic Arts, and Science) Education, Literature, News, Markets, etc., and has a LARGER CIRCULATION than any similar journal in the world—the best evidence of superior merit. Published weekly—eight double quarto pages (40 columns), illustrated and printed in best style, at $2 a year—$1 for six months. A new quarter commences 1st October: and hence Now is THE TIME TO SUBSCRIBE. Specimens sent free. Address,

D. D. T. MOORE, Rochester, N. Y.

LOOKING GLASSES

and PICTURE FRAMES, Wholesale and Retail by JOHN . WILLARD, 440 Pearl street, near Chatham street, New York. Nov. 13t b

"We pronounce it the most beautiful weekly paper in the Union."—*Rhode Island Reformer.*

LIFE ILLUSTRATED. A FIRST-CLASS

WEEKLY NEWSPAPER, devoted to News, Literature, Science, and the Arts; to ENTERTAINMENT, IMPROVEMENT, and PROGRESS. Designed to encourage a spirit of HOPE, MANLINESS, SELF-RELIANCE, and ACTIVITY among the people; to point out the means of profitable economy; and to discuss the LEADING IDEAS OF THE DAY; to record all signs of PROGRESS; and to advocate POLITICAL and INDUSTRIAL RIGHTS FOR ALL CLASSES.

Its ample columns contain Original Essays—Historical, Biographical, and Descriptive; Sketches of Travel and Adventure; Poetry, Painting, Music, Sculpture, etc.; Articles on Science, Agriculture, Horticulture, Physiology, Education, the Markets, General News, and every topic which is of importance or interest; all combining to render it one of the BEST FAMILY NEWSPAPERS IN THE WORLD. Published weekly, at $2 00 a year, in advance.

"Certainly one of the most beautiful specimens of newspaper printing we have ever seen."—*Buffalo Christian Advocate.*

"Ably conducted, with an eye to a good moral purpose."—*Knickerbocker Magazine.*

"It shows the well-known energy and tact of the spirited publishers, as caterers for the people."—*New York Tribune.*

"It has a remarkably clear face and clean hands, which will recommend it to people of taste."—*Home Journal.*

"The cleanest, smoothest, and whitest paper, printed in a style of typographical beauty such as we never saw exceeded—no, nor equaled."—*Tioga County Agitator.*

"The handsomest and most useful paper that ever came under our observation."—*Rising Star.*

"Without a parallel."—*True Free Soiler.*

"It is filled with valuable matter, and treats of subjects interesting to the human race."—*La Crosse Republican.*

COMMUNICATIONS, NEW BOOKS for notice or review, ADVERTISEMENTS, and SUBSCRIPTIONS, should be addressed to the PUBLISHERS, as follows:

BOSTON: 142 Washington Street.
PHILADELPHIA: 231 Arch Street.

FOWLER AND WELLS,
No. 308 Broadway, New York.

FOR THREE DOLLARS, in advance, a copy of LIFE ILLUSTRATED, the PHRENOLOGICAL JOURNAL, and the WATER-CURE JOURNAL, will be sent a year to one address. Now is the time to Subscribe.

Let us add that OUR PAPER is of the best quality, manufactured expressly for our use—white, clean, cheerful-looking, and attractive. To be printed in QUARTO FORM, suitable for binding.

That OUR TYPES are new, sharp, and clear, electrotyped with copper, a process which ensures beauty, distinctness and durability.

That OUR PRESSES are also new and complete, propelled by the power of steam, enabling us to print 10,000 copies an hour.

Life Illustrated will be furnished on the following very low terms, in advance:

Single Copy, one year,	$2 00	Nine Copies, one year,	$12 00
Three Copies, one year,	5 00	Twelve Copies, one year,	15 00
Five Copies, one year,	8 00	Fifteen Copies, one year,	17 00
Seven Copies, one year,	10 00	Twenty Copies, one year,	20 00

Each Copy more than twenty, ... $1 00.

Subscriptions may commence any time. Papers sent no longer than paid for. Now is the time to subscribe.

FOWLER AND WELLS, 308 Broadway, New York.

Opinions of Subscribers and Correspondents.

"LIFE ILLUSTRATED is destined to become a bright particular star in the firmament of literature."—*Ella (a contributor to periodical literature).*

"Although I take several other papers, I am always anxious to see 'LIFE' first. It is the best paper for the money that is published. I have often found things in a single number worth more than the price for a year. Some of our ladies here think they could do as well without their own life, as yours, when the latter is a day or two behindhand."—*D. N. R., Oneida Co., N. Y.*

"LIFE ILLUSTRATED is a model newspaper, not equalled by any other that I know of on earth. I wish it visited every family in the land."—*M. A. T., New Brighton, Pa.*

"I am poor, but I do not know how to live without 'LIFE,' therefore continue my subscription. I am acquainted with no paper that suits me so well as LIFE ILLUSTRATED."—*C. C., Canastota, N. Y.*

"We are all young men, just commencing our career as pioneers of the frontier; and while we are struggling against the adverse winds of a 'new settler's' life, we have not the remotest idea of neglecting to feed the immortal mind. And in pursuance of our resolve, we have determined upon 'LIFE ILLUSTRATED' as being the one thing needful."—*I. W. D., sending a club from Minnesota Territory.*)

A DIRECT APPEAL

TO THE READER.

Having been a reader of the PHRENOLOGICAL JOURNAL for a length of time, you are now competent to judge of its merits, and we have no doubt, will feel willing to point out its peculiar advantages, and describe its excellencies to your friends and neighbors who have not yet become acquainted with its aims, objects and utility.

In some places it is a common thing for our Friends and Co-workers to go about and induce every family within their circuit to join them in a Club, which may number from TWENTY to a HUNDRED, and sometimes more, when the subscribers get the JOURNAL for ONE HALF the single subscription price.

THE A. P. JOURNAL is now thoroughly established, having been before the public many years, though quite too many of our people have never yet *heard* of it.

Judging from the numerous earnest Testimonials which come to us daily from all parts of the country, we believe it is doing great good wherever known and circulated. You are already familiar with it, and need no assurance from us that it will continue to disseminate the same reformatory philosophy and principles, explained, illustrated, and made *practical* by our Editors, Correspondents, and the leading writers of America and Europe.

The size and form of the A. P. JOURNAL render it handy for reading and convenient for binding. Its contents equal that of any magazine with 570 large octavo pages.

The price is as LOW or LOWER, considering the amount of original matter, the superior quality of paper and type, its mechanical execution, than can be furnished for the money or found in this country.

TERMS BY THE YEAR.

Single Copy, one year,	$1 00	Full Retail Price,	$1 00
Five Copies, "	4 00	" "	5 00
Ten Copies, "	7 00	" "	10 00
Twenty Copies, "	10 00	" "	20 00

TERMS FOR SIX MONTHS.

Single Copy, half a year,	$0 50	Full Retail Price,	$0 50
Five Copies, "	2 00	" "	2 50
Ten Copies, "	3 50	" "	5 00
Twenty Copies,	5 00	" "	10 00

The postage on this JOURNAL is only *six cents a year.* Sample numbers always sent gratuitously when desired. Large sums may be sent in Checks or Drafts, payable to FOWLER AND WELLS. Eastern funds preferred, though bill on any Specie-paying Bank, Postage Stamps, small Gold or Silver coins, received at par.

Besides giving you the JOURNAL at the exceedingly low Club rates named above, we will add by way of further inducement, to remunerate you for kind services,

A PREMIUM

☞ To You.—For every Fifty dollars you send us we will send One Hundred Journals one year, or Two Hundred half a year, and the wo th of TEN DOLLARS in any Books published at this office; a complete catalogue of which will be sent you gratis, postage prepaid, from which you can select such works as you may desire.

For Twenty-five dollars Fifty copies of the Journal one year, or One Hundred copies half a year, and FIVE DOLLARS in Books.

For Fifteen dollars Thirty copies will be sent one year, or Sixty copies half a year, and the worth of TWO DOLLARS in Books.

For Ten dollars Twenty copies one year, or Forty copies half a year, and ONE DOLLAR in Books.

Now here is a rare chance; first, to introduce the JOURNAL at a very small cost into the hands of those who would be greatly benefited by reading its instructive pages, and secondly to secure for yourself a VALUABLE LIBRARY, with no other outlay on your part than the time labor, and "conversation" necessary to explain the character of the JOURNAL, and to induce persons to subscribe for it, the reading of which for six months or a year, would amply repay any one for the investment.

READER will you not use your influence to form a Club at once, in your own vicinity?

All new yearly, or half-yearly subscribers, may commence with the July number, and terminate in December next, or if they subscribe for a year it will terminate with the June number, in 1856. Should you not be able to attend to the matter personally, will you have the kindness to induce some responsible acquaintance to do so? Hoping to hear from you soon, we remain, very truly, your friends,

FOWLER AND WELLS,
No. 308 Broadway, New York.